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Wednesday - November 15, 2023

9:21 a.m.

P R O C E E D I N G S

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(Proceedings were heard out of the presence of the jury:)

THE CLERK: Calling Civil 20-5671, Epic Games, Inc.
vs. Google LLC, and Multidistrict Litigation 21-2981, In re
Google Play Store Antitrust Litigation.

MR. BORNSTEIN: Good morning, Your Honor. Gary
Bornstein for Epic Games.

MR. POMERANTZ: Good morning, Your Honor.
Glenn Pomerantz on behalf of Google.

THE COURT: Now, who do we have today?

MR. BORNSTEIN: We have Kirsten Rasanen, who's a
Google witness. Our other live witness today, another Google
witness, is Dave Kleidermacher, and we are also hoping between
the two to fit in the Amazon video.

THE COURT: All right. Now, what are the -- just
roughly, what are the Google witnesses going to be covering?

MR. BORNSTEIN: I'm going to defer to Mr. Pomerantz on
Rasanen. Mr. Kleidermacher is a security witness, a technical
person.

THE COURT: Security. Okay. And then you're
calling --

MR. POMERANTZ: No. They're calling --

MR. BORNSTEIN: No. We're calling Rasanen. It's just

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1 not me who's calling Rasanen. I can let Mr. Hueston talk in
2 more detail about her -- the exam.

3 **THE COURT:** All right. That's fine. I'm not worried
4 yet about things getting cumulative, but we are hearing a lot
5 of the same stuff now. All right? I think we've heard a lot
6 about Samsung Galaxy, a lot about MADA, a lot about RSA.

7 **MR. BORNSTEIN:** If it would be helpful, Your Honor, I
8 can give you a preview of where we're landing on schedule and
9 the like.

10 **THE COURT:** I would like to and also as part of that I
11 want to when are the economists coming in.

12 **MR. BORNSTEIN:** So our expectation, if things go as we
13 hope, is we're going to finish our fact witnesses tomorrow.

14 **THE COURT:** Tomorrow?

15 **MR. BORNSTEIN:** Tomorrow.

16 **THE COURT:** Okay.

17 **MR. BORNSTEIN:** You know, I know we have a little bit
18 of a shorter day tomorrow because we have the other thing
19 happening at 3:00 o'clock.

20 **THE COURT:** Oh, by the way, on that, so we're going to
21 end at 2:45 tomorrow, and I just told the jury that means we're
22 probably going to truncate the afternoon break a little bit.
23 So we'll be more or less on track. We shouldn't lose too much
24 time.

25 **MR. BORNSTEIN:** Okay.

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1 **THE COURT:** Go ahead.

2 **MR. BORNSTEIN:** Yeah. So assuming we can get all that
3 in, it's possible, Your Honor, we have a video or something
4 that flops over to the next day; and we do have two very short
5 videos, about 15 minutes total between the two of them, that
6 are finance people that we want to play right before the
7 accountants testify just so the jury has that fresh.

8 **THE COURT:** Okay.

9 **MR. BORNSTEIN:** But then what Mr. Pomerantz and I were
10 discussing, subject to your approval obviously, is we have
11 three pairs of expert witnesses, the topics being security, our
12 computer science people; the accountants who are very brief;
13 and then the economists.

14 Our hope was that if we were able to have time on Monday,
15 we could do both pairs, the security and the accountants, all
16 in one day; and then we would start the economists and
17 hopefully get our main economist off and on on Tuesday.

18 **THE COURT:** What are the accountants doing?

19 **MR. BORNSTEIN:** The accountants are covering the
20 profits issues, so they'll be explaining our perspective and
21 obviously Google's perspective on the degree of profitability
22 of the Play Store.

23 And then the economists will talk about --

24 **THE COURT:** You just mean a net profit margin? Is
25 that all --

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1 **MR. BORNSTEIN:** Correct.

2 **THE COURT:** You all can't agree on that?

3 **MR. BORNSTEIN:** Correct, unfortunately.

4 **THE COURT:** Are you within spitting distance?

5 **MR. BORNSTEIN:** The main issue, Your Honor, I think,
6 is how the costs should be allocated, and we do have a
7 different perspective on that. There was some testimony about
8 that with Mr. Pichai.

9 **THE COURT:** Let me ask you this, I'll ask
10 Mr. Pomerantz: Doing it 100 percent your way, what is the net
11 profit margin?

12 **MR. POMERANTZ:** I don't know.

13 **THE COURT:** Just roughly.

14 **MR. POMERANTZ:** I'm not handling those experts. Can I
15 just speak with Mr. Rocca for a second?

16 (Pause in proceedings.)

17 **MR. POMERANTZ:** Your Honor, the company does not do
18 the analysis at the level that is being presented in this case;
19 that is, how much of the Android costs should be allocated to
20 Play. So simply what we are showing is that Android costs
21 obviously are relevant to Play because there would be no
22 Play Store without it, and that someone would have to allocate
23 some of those costs to Play, and they are relying on figures
24 which allocate none of those costs to Play.

25 But I do not -- we do not offer a calculation of what the

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1 margin would be if you allocated those costs because that isn't
2 the way Google ever does it.

3 So the question is simply the fact that they're relying on
4 both profit numbers and margins that clearly do not include any
5 Android costs we think is not the right way for the jury to
6 think about that, and that's the point of the testimony.

7 **THE COURT:** Okay. I'm just -- I don't want a huge --
8 is this going to be a big discussion about GAAP?

9 **MR. BORNSTEIN:** No, Your Honor. The gist of the
10 testimony that our expert will provide, you know, as it appears
11 in his report, is that he is relying on the documents that go
12 to senior management and the board that do have profit margin
13 figures; and the gist of it is, if this is what the board is
14 relying on, then those are sensible numbers, and he can tie
15 them out and show how those numbers make sense. It should be
16 quick testimony.

17 **THE COURT:** You can't get those in evidence. Who's
18 going to get those board documents into evidence?

19 **MR. BORNSTEIN:** Oh, that's why we have the 15 minutes
20 of video that we want to play before the economists.

21 **THE COURT:** It will be in evidence, and then he's
22 going to say: As an accountant, my conclusion would be their
23 net profit margin is X, or something like that?

24 **MR. BORNSTEIN:** Correct.

25 **THE COURT:** Okay. That shouldn't take more than an

1 hour.

2 **MR. BORNSTEIN:** I agree.

3 **THE COURT:** Okay. By the way, when I say GAAP, it's
4 G-A-A-P is what I was referring to.

5 Okay. So we're not going to get into all that. I don't
6 want any arcana about accounting rituals and dances and things
7 like that.

8 **MR. BORNSTEIN:** Absolutely.

9 **THE COURT:** I see a lot of that in my security cases.

10 **MR. BORNSTEIN:** This should be pretty straightforward,
11 Your Honor.

12 **THE COURT:** Okay. So the economists, when are we
13 going to get to the economists?

14 **MR. BORNSTEIN:** So if we get all the security computer
15 science folks and the accountants done on Monday, even if it
16 maybe takes a little bit more than our typical day, then we can
17 start the economists on Tuesday. I think we can get our main
18 economist on and off the stand on Tuesday.

19 **THE COURT:** Tuesday. This is going to be back to
20 back.

21 **MR. BORNSTEIN:** Yes. And then the other economist
22 would start after the break. So they'll be back to back, but
23 there would be obviously the holiday in between.

24 **THE COURT:** Why is Monday going to be tight with
25 just -- we're going to do an hour on accounting. Okay. So --

1 **MR. BORNSTEIN:** I'm not sure how long --

2 **THE COURT:** You're going to spend four hours on
3 security?

4 **MR. BORNSTEIN:** I would hope to get that done more
5 quickly, Your Honor, I do. I just -- the way things are going,
6 I'm not sure. I'd like to get them all done.

7 **THE COURT:** If we finish the way I'm thinking we
8 should, how are you going to fill that time if your fact
9 witnesses are all done?

10 **MR. BORNSTEIN:** Well, we can start -- we'll be ready
11 to begin the economists on Monday if we have time.

12 **THE COURT:** Okay. Let's do that. Just have someone
13 ready to go.

14 **MR. BORNSTEIN:** Of course. Yeah.

15 **THE COURT:** Okay. All right. Well, that's good news.
16 Your fact witnesses will be done tomorrow.

17 **MR. BORNSTEIN:** Yeah.

18 **THE COURT:** All right. Oh, so it's time to start
19 getting into the final jury instructions again. I went through
20 them briefly. They have to be de-Matched. Okay? They have
21 "Match" all over them. You have to do that, so give me a new
22 one of those.

23 And, also, you're pretty good on this, but really just
24 strictly adhere to our model instructions or the ABA proposed
25 ones. All right? Please, no editing.

1 On CACI, the California state ones, I didn't spend an
2 enormous amount of time on it because we're not quite ready for
3 that yet; but, you know, this is mainly for Google's
4 counterclaims.

5 So CACI has form instructions, for example, on a
6 counterclaim for breach of contract. And for some reason there
7 are almost a page of disputes about the breach of contract form
8 instruction, which I cannot imagine makes any sense whatsoever.

9 So really go back, look at CACI. And, I mean, one of them
10 says there's a dispute over the introduction to the breach of
11 contract instruction. You must solve these things. Okay?
12 Because I haven't looked at it, but I can guarantee you based
13 on my long experience, the breach of contract is just going to
14 be just some fairly noncontroversial statements about the
15 contract. Okay? So just make all that happen. All right?

16 So how about by next Wednesday?

17 **MR. BORNSTEIN:** That's fine, Your Honor.

18 **THE COURT:** Okay. You know, because I don't want
19 to -- I usually have them done before this point, but we
20 weren't able to do that here, which is fine, but I don't want
21 to do this at the last minute.

22 Okay. Let's talk right now. What about the Spotify
23 thing? Is that for today or not?

24 **MR. BORNSTEIN:** We do not need to play it today. I
25 think we could have time depending on how long the witnesses

1 go --

2 **THE COURT:** All right.

3 **MR. BORNSTEIN:** -- but that would be our --

4 **THE COURT:** We'll talk about it at the end of the day
5 then.

6 **MR. BORNSTEIN:** Sure.

7 **THE COURT:** Okay. So we're all set otherwise?

8 **MR. BORNSTEIN:** The only other thing that we had to
9 raise is in preparation for the hearing at 3:00 tomorrow.

10 **THE COURT:** Yes.

11 **MR. BORNSTEIN:** We just wanted to see if Your Honor
12 had any guidance for us about what would be most useful in
13 terms of questioning and presentation and the like.

14 **THE COURT:** Well, it would be good to have someone --
15 look, I know you have a lot of work to do, either side, but
16 this has to be resolved. So it would be good to have a very
17 short kind of summary exam of everything we know so far about
18 what has -- what was and was not done with respect to Chat
19 preservation, but I really want to focus it on what the
20 in-house people were doing under -- who is it going to be? Is
21 it going to be Kent Walker?

22 **MR. POMERANTZ:** I believe so.

23 **THE COURT:** Or I should ask you. Kent Walker?

24 **MR. POMERANTZ:** I believe so, Your Honor.

25 **THE COURT:** Okay. So I want to find out from

1 Mr. Walker what he and his team were doing. Now, if his answer
2 is "I delegated it to X," you need to have that person here.
3 So figure that out before they come in. All right?

4 I made a point of saying President Truman's line of "The
5 buck stops here." So I don't want any buck passing. All
6 right?

7 Now, the CEO, appropriately in my view, as a nonlawyer,
8 said, "Ask Mr. Walker." I don't want to hear from Mr. Walker
9 "Ask Ms. X." Okay? Unless she's here or he's here. So make
10 sure that happens. All right? So I want an accounting of
11 that.

12 I want an understanding of who on the outside counsel team
13 was involved in this and who is responsible for organizing the
14 hold with respect to in-house counsel and what they did or did
15 not do. You can ask questions along those lines.

16 I'm going to look at the litigation hold documents. Did
17 you lodge those yet?

18 **MR. POMERANTZ:** No. We will today, Your Honor.

19 **THE COURT:** All right.

20 Okay. And I want to make sure that those are adequate
21 under the circumstances, and then I may pick it up from there.
22 You can certainly ask any questions you want to. Okay?

23 **MR. BORNSTEIN:** And is it your expectation --

24 **THE COURT:** And at the end of that, not necessarily,
25 but we'll probably have some additional briefing on permissive

1 versus mandatory instruction.

2 **MR. BORNSTEIN:** All right. And is your expectation,
3 Your Honor, we would go first on the exam?

4 **THE COURT:** Yes. Okay? Is that all right? Are you
5 good with that?

6 **MR. BORNSTEIN:** Absolutely.

7 And Mr. Pomerantz and I discussed earlier, I represented
8 we would absolutely argue no waiver, but we would like to
9 receive whatever documents are they provide to the Court as
10 well on lit hold.

11 **THE COURT:** Yeah. In all likelihood that will happen.
12 I just have to do a little bit more thinking on that.

13 **MR. BORNSTEIN:** Thank you.

14 **THE COURT:** I'm not going to have you do a blind exam.
15 Okay. Let's bring the jury in, please.

16 **MR. BORNSTEIN:** Thank you, Your Honor.

17 (Proceedings were heard in the presence of the jury:)

18 **THE CLERK:** Calling Civil 20-5671, Epic Games, Inc.
19 vs. Google LLC, and Multidistrict Litigation 21-2981, In re
20 Google Play Store Antitrust Litigation.

21 Counsel.

22 **MR. BORNSTEIN:** Good morning, Your Honor. Gary
23 Bornstein for Epic Games. I am joined today by John Hueston,
24 Michael Zaken, Yonatan Even, Lauren Moskowitz, Andrew Wiktor,
25 and Joe Reiter.

1 **MR. POMERANTZ:** Good morning, Your Honor.

2 Glenn Pomerantz on behalf of Google, and with me is Lauren
3 Bell, Steve Sparling, Kuru Olasa, and Jonathan Kravis.

4 **THE COURT:** Okay. Members of the jury, we're making
5 very good progress. And I talked with the lawyers a little bit
6 about our schedule for the next couple of days. Now, remember,
7 as I said before, it's a live show so things happen, but here's
8 our best projection.

9 Epic is going to wrap up its fact witnesses tomorrow.
10 Okay? We'll start hearing expert witnesses on Monday and
11 Tuesday, and then there might be a couple defense-related or
12 counterclaim-related witnesses after that, but we're on or
13 ahead of schedule right now. Okay?

14 Remember, that's -- we'll see what happens, but right now
15 it's trending the right way in terms of being on track. Okay?

16 So we will start at 9:00 a.m. tomorrow, and I have another
17 proceeding I have to attend to so we'll end at 2:45 tomorrow on
18 the dot, just right on the dot, which means I'm probably going
19 to trim the afternoon break just a little bit to make sure that
20 we don't lose too much time. Okay?

21 All right. Who do we have next?

22 **MR. HUESTON:** Good morning, Your Honor. Epic Games
23 calls Ms. Kirsten Rasanen.

24 **THE CLERK:** Please stand and raise your right hand.

25 \\

RASANEN - DIRECT / HUESTON

KIRSTEN RASANEN,

called as a witness for the Plaintiff, having been duly sworn,
testified as follows:

THE WITNESS: Yes, I do.

THE CLERK: Thank you. Please be seated.

Please state your full name for the Court and spell your
last name.

THE WITNESS: My name is Kirsten Rasanen. It's
R-A-S-A-N-E-N.

THE CLERK: Thank you.

DIRECT EXAMINATION

BY MR. HUESTON:

Q. Good morning, Ms. Rasanen.

A. Hi.

Q. You've worked at Google since around 2012; is that right?

A. Yes, that's right.

Q. And you've held a number of roles at Google over time?

A. Correct.

Q. And so starting in 2014, you worked as a strategic partner
manager at Google Play; right?

A. That's right.

Q. And you were responsible for managing Google's
relationships with developers of social and music apps; right?

A. That's right.

Q. And in August of 2017, your role expanded and your title

1 became director of Play partnerships; correct?

2 **A.** Yes.

3 **Q.** In that role, you supervised Google employees who managed
4 relationships with app developers; right?

5 **A.** Yes.

6 **Q.** So let's talk about Google's payment policy; and so for
7 that, you have a couple binders in front of you. I'll ask if
8 you could turn to Exhibit 1436. It should be numbered in those
9 tabs.

10 **A.** Sorry.

11 **Q.** Do you see Tab 1436?

12 **A.** Yes. Thank you.

13 **Q.** Okay. And just glancing at that first page, you recognize
14 this as a prior version of Google's payments policy; right?

15 **A.** Yes.

16 **MR. HUESTON:** We move this into evidence at this time,
17 Your Honor.

18 **MR. KRAVIS:** No objection.

19 **THE COURT:** It's admitted.

20 (Trial Exhibit 1436 received in evidence.)

21 **BY MR. HUESTON:**

22 **Q.** Okay. And we have it up on the screen, and let's go under
23 the subheading that says, quote, "In-app Purchases." It says,
24 quote (as read):

25 "Developers offering products within another category

1 of app downloaded on Google Play must use Google Play
2 in-app billing as the method of payment, except for the
3 following cases..."

4 Do you see that?

5 **A.** Yes. I'm sorry. Am I supposed to see it on this screen
6 too or no?

7 **Q.** It should be on the screen. Do you see it there?

8 **A.** No. This screen is dark.

9 **THE COURT:** Oh. Is that on?

10 **THE WITNESS:** It doesn't seem to be.

11 **THE COURT:** Okay. Let's me just take a look.

12 Are you sure it's not on?

13 **THE WITNESS:** I can't see anything. I had to touch it
14 to wake it up. I apologize.

15 **THE COURT:** It's okay.

16 **THE WITNESS:** Okay. Yes. I'm sorry for the delay. I
17 see it.

18 **BY MR. HUESTON:**

19 **Q.** No worries. It's now awake?

20 **A.** Yes.

21 **Q.** So looking now at the document on the screen, "In-app
22 Purchases" (as read):

23 "Developers offering products within another category
24 of app downloaded on Google Play must use Google Play
25 in-app billing as the method of payment except for the

1 following cases..."

2 Right?

3 **A.** Yes.

4 **Q.** And if we look at the second exception, it says (as read):

5 "Payment is for digital content that may be consumed
6 outside of the app itself."

7 Right?

8 **A.** Yes.

9 **Q.** And Google had that exception in its payments policy for
10 as long as you had worked there; right?

11 **A.** Correct.

12 **Q.** But in 2017 you began working on updating the payments
13 policy to explicitly require Google Play Billing for all
14 developers selling digital goods and services; right?

15 **A.** Yes.

16 **Q.** And before making that change, you spoke to developers to
17 get what you called honest feedback; right? Their honest
18 feedback and reaction; right?

19 **A.** Yes.

20 **Q.** So I'd like to go over some of the feedback you received
21 from developers.

22 You recall that developers said that they did not want to
23 give up their optimized legacy payment platforms; right?

24 **A.** Yes, to some extent. I don't know if those were the exact
25 words but, yes.

1 Q. Okay. Well, in other words, developers had customized
2 their billing platforms specifically for their apps; right?

3 A. That's right.

4 Q. Okay. So let's go to Demo 1, and we'll just put that up
5 on the screen.

6 The first developer concern, did not want to give up
7 customized billing platforms. That's one of the concerns you
8 heard; right?

9 A. Yes.

10 Q. Okay.

11 A. At that time, that is one of the concerns we heard.

12 Q. Right. We're focused on that time period.

13 And we can put the demonstrative down.

14 And developers, in fact, told you that they believed their
15 customized billing platforms would perform better than
16 Google Play Billing; right?

17 A. They believed that, yes.

18 Q. Right. For example, Spotify told you its billing system
19 was better for Spotify than Google Play Billing would be;
20 right?

21 A. That is what they told us.

22 Q. And they told you its billing system had capabilities --
23 sorry.

24 Are you all set?

25 All right. They told you that its billing system had

1 capabilities that Google Play Billing lacked; right?

2 **A.** Correct.

3 **Q.** So let's go to Exhibit 1442 in your binder.

4 And you recognize this as an e-mail you sent in
5 November 2017 to members at Google; right?

6 **A.** Yes.

7 **MR. HUESTON:** We move to admit this at this time,
8 Your Honor.

9 **MR. KRAVIS:** No objection.

10 **THE COURT:** It is admitted.

11 (Trial Exhibit 1442 received in evidence.)

12 **BY MR. HUESTON:**

13 **Q.** On your screen I'm going to turn your attention to the
14 bottom of the second page, it goes onto the third page, and
15 under, quote, "Product Concerns," it says (as read):

16 "Spotify believes that their platform has
17 capabilities that GPB" -- Google Play Billing -- "lacks."
18 That's what you reported; right?

19 **A.** That's right.

20 **Q.** And Spotify also had concerns about the, quote, "lack of
21 control that would result from using Google Play Billing
22 instead of their own platform"; right?

23 **A.** That's right.

24 **Q.** And those concerns included platform capabilities,
25 ownership of customer relationships, and deep knowledge of user

1 behavior; right?

2 A. That's right.

3 Q. And Spotify also told you it believed Google should not,
4 quote, "act as gatekeepers," end quote, restricting developer
5 choice; right?

6 A. That is what is reported here, yeah.

7 Q. Well, you recorded that there; right?

8 A. Yeah. I think I pulled this out of the document, but I
9 did write this in the e-mail.

10 Q. Right. Yeah. In fact, you wrote (as read):

11 "Hi, Jamie.

12 "The doc has lots of detail, but key concerns and
13 arguments revolve around..."

14 Those are the points you picked out and set forth for
15 Mr. Rosenberg; right?

16 A. I agree, yes.

17 Q. And you reported to him; right?

18 A. I did not report directly to him at the time, but I was in
19 his organization.

20 Q. Okay. So we can take that document down.

21 And it wasn't just Spotify; right? Match also told you
22 that its billing system performed better than Google Play
23 Billing; right?

24 A. They did tell us that.

25 Q. And you agree that Match had a quite sophisticated billing

1 platform; right?

2 A. I did -- yeah. They reported that they did, yes.

3 Q. Okay. Well, you agree that Google Play Billing in some
4 ways is not as good at the time as Match's billing system;
5 right?

6 A. I did write that at the time, yes.

7 Q. And so let's look a little more closely at that.

8 Let's go to Exhibit 704. It's already in evidence so we
9 can just pull it up.

10 And you'll see this is an e-mail chain that includes you
11 and others at Google. Do you see that?

12 A. I do see that.

13 Q. Okay. And the subject is "Tinder and Google Play
14 Billing"; right?

15 A. Yes.

16 Q. With bracket "Concern." Do you see that?

17 A. Yes.

18 Q. And so now I'm going to turn on this --

19 THE COURT: You need to get a little closer and keep
20 your voice up, please.

21 THE WITNESS: I apologize. Sure.

22 THE COURT: Yeah, that's fine.

23 THE WITNESS: Sorry.

24 THE COURT: That's all right.

25 \\\

1 **BY MR. HUESTON:**

2 **Q.** No worries.

3 We're now going to turn to the second e-mail on the second
4 page, and that's from you on January 12th, 2017, to Sameer
5 Samat and others at Google; right?

6 **A.** That's right.

7 **Q.** We go to the second bullet down. It says (as read):

8 "The larger, most profitable services like Match,
9 Zoosk, and eHarmony began as web businesses 10 to 20 years
10 ago and are actually quite sophisticated in terms of churn
11 reduction, reengagement, and buyer conversion. In some
12 ways our billing platform is not as good as theirs
13 currently are."

14 You wrote those words; right?

15 **A.** Yes.

16 **Q.** And that's what you thought at that time; right?

17 **A.** Yes, that's what I wrote. I said "in some ways," uh-huh.

18 **Q.** And Badoo was another app that was very proud of their
19 proprietary billing system; right?

20 **A.** Yes. I'm not sure I recall Badoo specifically, but
21 they're another dating app that had a proprietary billing
22 system.

23 **Q.** Okay. Well, let's look at Exhibit 8582.

24 Okay. Do you see that in front of you?

25 **A.** (Witness examines document.) At this time I don't think

1 it's me.

2 **Q.** Okay. Do you recall -- without looking at the document,
3 do you recall that Badoo had been expressing that they were
4 very proud of their proprietary billing system and had prickled
5 at the notion of becoming exclusively Google Play Billing?

6 **A.** I don't recall pride or prickle, but I know they did not
7 want to use Google Play Billing, that's correct, sir.

8 **Q.** All right. Fair enough.

9 Let's move to a different concern. Another concern
10 developers had is that Google's service fee they felt were too
11 high; right?

12 **A.** That was one of the concerns.

13 **Q.** Right. So let's come back to Exhibit 704, and going to
14 the end of the same paragraph we just saw, you write, quote (as
15 read):

16 "They tell us 30 percent rev share is still
17 prohibitive for exclusive adoption."

18 Do you see that?

19 **A.** Yes.

20 **Q.** And you were referring to the 30 percent service fee that
21 Google was charging at this time for transactions processed by
22 Google Play Billing; right?

23 **A.** Yes.

24 **Q.** And by "prohibitive," you meant prohibitively high; right?

25 **A.** Yes. I believe -- I believe so; but, again, I'm not sure

1 if I meant prohibitively high. Yeah, it says that it was
2 prohibitive.

3 This was a long time ago. I'm really sorry. I don't know
4 what I meant.

5 Q. Understood. But looking at this, it's in the context of a
6 30 percent rev share is still prohibitive, prohibitively costly
7 or high; right?

8 A. Yes.

9 Q. Okay. And Match asked to pay Google a service fee that
10 was closer to the fees that Match pays other payment
11 processors; right?

12 A. Yes. They wanted to pay the same fee as a standard
13 payment processor.

14 Q. Right. And you understood that the standard payment
15 processors typically charge a fee closer to 5 percent; right?

16 A. I think so at the time. I don't know what it says here,
17 but that sounds right.

18 Q. That sounds right.

19 And Netflix had a similar complaint to Match; right? Do
20 you remember that?

21 A. Yes. That was a little earlier than this but, yeah.

22 Q. Okay. And you recall Netflix also felt that Google Play
23 Billing did not drive incremental value that justified its rev
24 share; right?

25 A. I -- again, I don't recall Netflix's specific objections.

1 They did not want to use Google Play Billing either.

2 Q. Okay. Let's see if I can help you on this --

3 THE COURT: You really have to keep your voice up.

4 THE WITNESS: Okay. I'm sorry.

5 THE COURT: I'm having trouble hearing. Okay?

6 THE WITNESS: Apologies. I will do my best.

7 BY MR. HUESTON:

8 Q. Let's see if I can help you with that. Let's go to
9 Exhibit 8574 in your binder.

10 A. In my binder?

11 Q. Yeah.

12 A. Okay. Sorry. 8574?

13 Q. Yes.

14 A. (Witness examines document.) Okay. Sorry.

15 Q. Okay. And you recognize this as an internal Google
16 briefing document for an executive meeting between Netflix and
17 Google; right?

18 A. Yes, I do.

19 MR. HUESTON: Move this into evidence at this time.

20 MR. KRAVIS: No objection.

21 THE COURT: It's admitted.

22 (Trial Exhibit 8574 received in evidence.)

23 BY MR. HUESTON:

24 Q. Let's go to page 4 of this document, and on page 4, we'll
25 highlight it, you can see where it says, quote (as read):

1 "Payments: Google Play Billing still hasn't driven
2 incremental value that justifies the increased rev share."
3 Right?

4 **A.** That's what it says here, yes.

5 **Q.** Okay. And the rev share, of course, that's the fee that
6 Google charges; right?

7 **A.** That's correct.

8 **Q.** And below that it says, quote (as read):

9 "Netflix also working with these same payment
10 providers and operators as Google is. Netflix fees are 1
11 to 3 percent with these partners with Google Play Billing
12 it's 10 percent and no incremental revenue."
13 Right?

14 **A.** That's what it says here.

15 **Q.** Right. So it says that Netflix only pays a rev share of
16 10 percent versus 30 percent for games; right?

17 **A.** It says 10 percent, yes.

18 **Q.** Yeah. So even for a developer that pays only 10 percent,
19 they were still saying that Google Play Billing's fees were too
20 high here; right?

21 **A.** Yes.

22 **Q.** Okay. So let's go back to the demonstrative and put
23 Demonstrative Number 2.

24 Google fees are too high was another developer concern
25 that you were hearing; right?

1 A. That's what they said.

2 Q. Okay. Let's go on to another related point here.

3 During opening, the Google lawyer claimed that the service
4 fee pays for all the benefits of Google Play, not just payment
5 processing.

6 So I wanted to ask you: In your view, is one of those
7 supposed benefits making apps available for download on the
8 Google Play Store?

9 A. I think one of the benefits of Google Play is making apps
10 available for download, sure.

11 Q. Okay. But Google sometimes charges its 30 percent service
12 fee even when a user has not downloaded the app from the Google
13 Play Store; correct?

14 A. I don't know if that's true.

15 Q. Okay. Let's --

16 A. Maybe you can --

17 Q. I'll help you with that.

18 A. Thanks.

19 Q. Let's go to Exhibit 5820 in your binder for
20 identification.

21 A. Sorry. This is a big binder.

22 Q. No worries. It's a big binder.

23 A. And 5820?

24 Q. 5820, yeah.

25 A. (Witness examines document.) Okay.

1 Q. It should be an e-mail dated December 5th, 2017, and
2 you're copied on it. Do you see your name?

3 A. Yeah, I'm copied here.

4 MR. HUESTON: We move it into evidence at this time,
5 Your Honor.

6 MR. KRAVIS: No objection.

7 THE COURT: Admitted.

8 (Trial Exhibit 5820 received in evidence.)

9 BY MR. HUESTON:

10 Q. And now on the screen, if we go to the section titled
11 "Play Payment Policy Requirement," Mr. Sayigh writes (as read):

12 "Play's updated policy will state explicitly that
13 developers must use Google Play Billing exclusively if the
14 app is (1) Play-distributed."

15 Do you see that?

16 A. That's right.

17 Q. And it goes on to say, quote (as read):

18 "Note that (1) includes preinstalled apps which are
19 subsequently updated managed by Play. So if carrier
20 preinstalls an app but uses Play for updates, that app is
21 within bounds of our policy."

22 Do you see that?

23 A. Yes, that's right.

24 Q. All right. So the e-mail refers to carriers preinstalling
25 an app, not Google; right?

1 **A.** That's right.

2 **Q.** Okay. And so to be clear, those preinstalled apps,
3 they're not downloaded from Google Play Store, right, if
4 they're preinstalled?

5 **A.** They're updated through Play, that's correct.

6 **Q.** Well, they may be updated, but if they are -- if they're
7 preinstalled, they're not downloaded as apps from the Google
8 Play Store; right?

9 **A.** Not initially, correct.

10 **Q.** Okay. But under the updated policy referenced here,
11 Google requires those apps to use Google Play Billing and pay
12 Google's full service fee; right?

13 **A.** If they are updated by Play, that's right.

14 **Q.** Right. Even though they are preinstalled and not
15 initially downloaded by the Google Play Store; right?

16 **A.** Not initially downloaded, but their updates are downloaded
17 from Play.

18 **Q.** Okay. Now, another benefit that Google claims it provides
19 is app discovery; right?

20 **A.** Yes.

21 **Q.** And, in fact, yesterday the jury heard Google's CEO,
22 Mr. Pichai, say that Google Play Store is the primary source of
23 discovery for users. Do you agree with that statement?

24 **A.** For many apps it is.

25 **Q.** For many apps. Well, you're aware that many people don't

1 use the Google Play Store for any kind of app discovery at all;
2 right?

3 **A.** I don't -- I don't know. Can you qualify many? What do
4 you mean?

5 **Q.** Well, let's go --

6 **A.** Some people do not use the Google Play Store, that's
7 correct.

8 **Q.** Well, let's go to your own words before this lawsuit was
9 filed. Let's go to Exhibit 8539 in your binder.

10 If you can identify that as an e-mail you sent to your
11 colleagues at Google.

12 **A.** (Witness examines document.) Oh, in India, yes, that's
13 right.

14 **MR. HUESTON:** We'd move it into evidence at this time.

15 **MR. KRAVIS:** No objection.

16 **THE COURT:** It's admitted.

17 (Trial Exhibit 8539 received in evidence.)

18 **BY MR. HUESTON:**

19 **Q.** Okay. And let's go to the second page on the screen, and
20 we see an e-mail that you sent on July 30th, 2018; right?

21 **A.** Yes. It's the same one here, yes.

22 **Q.** Okay. And you sent the e-mail to other Google employees
23 to tell them what you had learned while traveling in India;
24 right?

25 **A.** Yes.

1 Q. Okay. And I'm going to move to the fourth paragraph here
2 on your screen, and you write, quote (as read):

3 "First and foremost, this trip was a lot of myth
4 busting for me."

5 Do you see that?

6 A. I do.

7 Q. And then three paragraphs down you then wrote, quote (as
8 read):

9 "Users do know what the Play Store is and they
10 actually use it but only for installs."

11 That was your language; right?

12 A. That was my language, yeah.

13 Q. And it's in bold; right?

14 A. Yeah, it is.

15 Q. And you then wrote (as read):

16 "Every user we spoke with -- I personally talked to
17 10 or so, the group met at least 100 overall -- knew the
18 Play Store and used it for many/most of their app
19 installs, but they don't use the Play Store for any kind
20 of app discovery at all."

21 You wrote that; right?

22 A. Yes, I wrote that.

23 Q. And, again, you bolded the words "They don't use the
24 Play Store for any kind of app discovery at all" and you
25 underlined "don't"; right?

1 A. I did.

2 Q. And then you wrote (as read):

3 "All their new apps and game suggestions came from
4 friends, family, or social media, sometimes ads. They
5 just use Play to install."

6 Do you see that?

7 A. I do.

8 Q. And let's go to the third page, second-to-last paragraph,
9 that begins "Play Store offers little value for app discovery."

10 Do you see that?

11 A. I do.

12 Q. And you then wrote (as read):

13 "Since the Play Store does little as of yet to aid
14 discovery or rediscovery, our value prop is limited to
15 that of a data pipe and app version management platform if
16 users update," exclamation point.

17 Right?

18 A. I wrote that.

19 Q. So now let's go to the first page of Exhibit 8539 where
20 your colleague Lei Zhang responded to you on the following day
21 on August 1st, 2018? Do you see that up on the screen?

22 A. I'm just getting there.

23 Q. Okay. It's also up on the screen.

24 A. Thank you.

25 Q. In the four lines down in the first large paragraph of the

1 e-mail, she writes (as read):

2 "By the way, I feel the observation of 'they don't
3 use the Play Store for any kind of app discovery at all'
4 is not only applicable to India."

5 Do you see that?

6 **A.** That's what he wrote, yeah. That's right.

7 **Q.** That's right. Thank you for the correction.

8 And he also wrote that the only app discovery for his own
9 family is through word of mouth and YouTube; right?

10 **A.** Yes.

11 **Q.** And you said he wrote that, but you agreed with that,
12 didn't you?

13 **A.** That -- I may have. You're going to show me where I did?

14 **Q.** Sure. I'm happy to do that.

15 **A.** Okay.

16 **Q.** In fact, you responded (as read):

17 "On the discovery piece, you're right, Lei. This is
18 not a EM-specific issue."

19 Right? Do you see that?

20 **A.** Yes, I wrote that.

21 **Q.** And "EM" means emerging market; right?

22 **A.** It does.

23 **Q.** Okay. And so what you were saying here is that even in
24 countries that are not emerging markets, users don't use the
25 Google Play Store for any kind of app discovery; right?

1 **A.** Yes. This is an issue in other countries too.

2 **Q.** Right. And, by the way, when a user in India downloads an
3 app from the Google Play Store and purchases digital content,
4 the developer has to pay Google's service fee; right?

5 **A.** That's right.

6 **Q.** There's no discount even if Google did not provide any app
7 discovery; right?

8 **A.** There is no discount for certain features of the services.
9 The services are one bundle.

10 **Q.** All right. And that's true for users in other emerging
11 markets and, in fact, throughout the world; right?

12 **A.** For some, yes.

13 **Q.** Now, developers also had concerns that Google's service
14 fee would affect the prices developers charge consumers; right?
15 You heard that complaint?

16 **A.** We heard that some developers charged more in app stores
17 than they did outside.

18 **Q.** Well -- yeah. Sorry.

19 Specifically developers were concerned that they would
20 need to charge a higher price to consumers in order to make up
21 for the 30 percent fee that Google takes; right?

22 **A.** Some developers did that.

23 **Q.** Okay. That was a concern that they brought up to you,
24 that they'd have to do that if they were required to pay the
25 30 percent; right?

1 **A.** That was a concern they brought up, that they may do that,
2 yeah.

3 **Q.** Let's go to, in your binder for identification,
4 Exhibit 1440. And you should recognize this as an e-mail you
5 wrote to Jamie Rosenberg February of 2018.

6 **A.** Okay.

7 **MR. HUESTON:** We move this into evidence at this time,
8 Your Honor.

9 **MR. KRAVIS:** No objection.

10 **THE COURT:** It's admitted.

11 (Trial Exhibit 1440 received in evidence.)

12 **BY MR. HUESTON:**

13 **Q.** And an e-mail to Jamie Rosenberg and Sameer Samat; right?

14 **A.** That's right.

15 **Q.** And these two folks, of course, were senior Google Play
16 executives at the time; right?

17 **A.** They were, yes.

18 **Q.** And you wrote this e-mail to provide an update on your
19 discussions with Netflix and Spotify regarding Google Play
20 Billing; right?

21 **A.** Yes, my discussions and my colleagues' discussions.

22 **Q.** Right. And looking a few lines down, it says (as read):

23 "Not good news:

24 "Spotify.

25 "Spotify thinks they'll have to charge more for users

1 acquired using Google Play Billing."

2 Right?

3 **A.** That's what they -- yeah, that's what they were concerned
4 about.

5 **Q.** In fact, Spotify believed they would have to charge users
6 more if Google required it to use Google Play Billing and pay
7 Google's service fee; right?

8 **A.** They were concerned that they would, yes, they would want
9 to.

10 **Q.** Okay. So let's go back do the demonstrative, this will be
11 Demonstrative 3, and add that concern, "Higher prices for
12 consumers."

13 All right. And now let's go to another issue developers
14 raised.

15 You recall they also expressed concern that Google's
16 policy prohibited them from informing users of cheaper payment
17 options; right?

18 **A.** Yes. I think that was -- I'm not sure if it was the
19 current policy or the new policy, the contemplated policy; but,
20 yes, that was one of the things Spotify talked to us about.

21 **Q.** Okay. Well, let's dig into that a bit.

22 Let's go to Exhibit 1417 in your binder. Take a look at
23 the last e-mail.

24 You'll recognize your e-mail there on Monday,
25 October 16th, 2017, the last e-mail on the first page of that.

1 Do you see your name?

2 **A.** Sorry. You're saying what's the number? 14?

3 **Q.** 1417.

4 **A.** 1417.

5 (Witness examines documents.) Are these in order? Oh,
6 I'm sorry. Gosh. Sorry.

7 **Q.** Okay.

8 **A.** Okay. I'm here. Sorry.

9 **Q.** This is an e-mail chain, and you have an e-mail near the
10 bottom of the first page; right?

11 **A.** Yes, I do.

12 **Q.** Okay.

13 **MR. HUESTON:** Move this into evidence at this time,
14 Your Honor.

15 **MR. KRAVIS:** No objection.

16 **THE COURT:** It's admitted.

17 (Trial Exhibit 1417 received in evidence.)

18 **BY MR. HUESTON:**

19 **Q.** And you recall Spotify telling you that requiring
20 Google Play Billing is not what's best for users or developers;
21 right? Do you see the highlighted language?

22 **A.** In their opinion they thought that this policy update may
23 not be right for users and developers.

24 **Q.** Right. What they say exactly here is (as read):

25 "We thought Google would remain an open platform and

1 do what's right for users and developers."

2 That's what they told you, you put in quotes; right?

3 **A.** That is what they said.

4 **Q.** And going to the second page, you list several,
5 quote/unquote, "key takeaways"; right?

6 **A.** Yes.

7 **Q.** Okay. And then going down to "Pricing Parity User
8 Communications," you write (as read):

9 "They would want to be able to tell users that they
10 can purchase for less elsewhere. Something our new policy
11 will expressly prohibit."

12 That's what you wrote; right?

13 **A.** That is what I wrote.

14 **Q.** Okay. Let's go back to the demonstrative, Demonstrative
15 Number 4, and add that concern.

16 "Prohibition on telling users that they can purchase for
17 less elsewhere"; correct? That's what we just covered?

18 **A.** That's what we just covered.

19 **Q.** All right. Now, Spotify told you that if it had to raise
20 prices in its Android app because of Google's service fees, it
21 would like to inform users that subscriptions were less
22 expensive if purchased outside the app; right?

23 **A.** Yes. That's what we just covered I think.

24 **Q.** Okay. Well --

25 **A.** It's different. I'm sorry. Can you maybe ask your

1 question again?

2 **Q.** I think let's move -- I'll move on to the next question.

3 You remember, for instance, that Spotify told you they
4 could offer less expensive options on the Internet; right?

5 **A.** They did tell us that.

6 **Q.** And Spotify's goal was to let the user choose his or her
7 preferred payment processor; right?

8 **A.** That was one of the discussions that we had with them.

9 Well, sorry. If I can correct. I don't think it was the
10 user choosing a preferred payment processor. I think -- I
11 don't know that users know what a payment processor is. I
12 think Spotify wanted to do that.

13 **Q.** Okay. Well, you understood that you were told that
14 Spotify's goal was to let the user choose his or her preferred
15 payment processors; correct?

16 **A.** I'm not sure if that's what -- how I framed it.

17 **Q.** Okay.

18 **A.** You may show me that.

19 **MR. HUESTON:** Well, Your Honor, deposition Tab 1 at
20 page 132, lines 11 to 15.

21 (Pause in proceedings.)

22 **THE COURT:** That's fine.

23 **MR. HUESTON:** Okay. Let's put it up.

24 **BY MR. HUESTON:**

25 **Q.** And you remember taking -- being subject to deposition,

1 being under oath, and giving testimony; right?

2 **A.** Yes, I do.

3 **Q.** Okay. (as read):

4 **"QUESTION:** Ms. Igo also told you Spotify's goal was to
5 let the user choose his or her preferred payment
6 processer; is that correct?

7 **"ANSWER:** According to this e-mail, yes, that's correct."
8 That was your testimony; right?

9 **A.** Yes.

10 **Q.** Okay. We can put that down.

11 But Google's policy would have prohibited Spotify from
12 informing users that they could purchase a subscription for
13 less outside the app; correct?

14 **A.** That was the contemplated policy as I understand it, yes.

15 **Q.** Right. In fact, Google's policy would have made it harder
16 for Spotify to fully inform users of their purchasing options;
17 right?

18 **A.** From within -- I think it was from within the app, yes.

19 **Q.** And Spotify told you that that wasn't fair to users;
20 right?

21 **A.** Perhaps they told me that.

22 **Q.** Okay. Well, they told --

23 **A.** They --

24 **Q.** -- they told you it wasn't fair to users not to inform
25 them of a less expensive option; correct?

A. To that effect, yes.

Q. Okay. And then you wrote, going back to the document (as read):

"They believe users should be fully informed of their choices; disadvantaging app users by not being able to tell them that pricing is lower elsewhere isn't fair to users. The user must be able to make a fully informed choice."

You wrote that; right?

A. I did.

Q. And you understood that Spotify's view was that its users must be able to make a fully informed choice; right?

A. They thought so, yes.

Q. Okay. But you don't have an opinion one way or the other on whether it's good for users to be fully informed of their purchase options before making a purchase, do you?

A. I don't think it's a bad thing for users to be informed of their choices.

Q. Okay.

MR. HUESTON: Your Honor, let's go to the deposition, Tab 1, page 136, lines 5 through 13.

(Pause in proceedings.)

THE COURT: Okay.

MR. HUESTON: Let's play the video, please.

(Video was played but not reported.)

1 **BY MR. HUESTON:**

2 **Q.** Okay. And, Ms. Rasanen, you don't have an opinion on
3 whether Spotify's goal of fully informing users before they
4 make a purchase decision was a good goal? You don't have an
5 opinion on that either; right?

6 **A.** As I said before, I think there's a lot of -- in my
7 deposition, there's -- how they inform users is what they were
8 arguing about. I -- of course, users being informed of their
9 choices and options is a good thing.

10 **MR. HUESTON:** Okay. Your Honor, I'd like to go to
11 deposition page 135, line 23, to page 136, line -- 135, line
12 23, to 136, line 3.

13 (Pause in proceedings.)

14 **THE COURT:** Okay. It's not particularly -- all right.
15 Go ahead.

16 **MR. HUESTON:** All right. Let's play this video clip.

17 (Video was played but not reported.)

18 **BY MR. HUESTON:**

19 **Q.** All right. Now, relatedly you heard complaints from
20 developers that Google's own apps were not required to use
21 Google Play Billing; right? You heard that?

22 **A.** We did hear that, yes.

23 **Q.** In particular, developers were concerned that YouTube,
24 which is one of Google's apps, didn't use Google Play Billing.
25 You remember that; right?

1 A. Yes.

2 Q. And you recall it's true that as late as at least June of
3 2018, YouTube was still strongly resisting using Google Play
4 Billing; right?

5 A. They were not using Google Play Billing; and, yes, that's
6 correct. I don't know strongly resisting, but they were not
7 using Google Play Billing.

8 Q. Okay. Fair enough.

9 Now, the fact that YouTube wasn't using Google Play
10 Billing made it extremely tough for Google to have
11 conversations externally with developers about adopting
12 Google Play Billing; right?

13 A. That is correct.

14 Q. So let's go to Exhibit 8554, and you'll recognize that in
15 your binder.

16 A. Oh, I'm sorry.

17 Q. I apologize. I didn't direct you.

18 A. I'm not sure where I'm looking.

19 Q. All good.

20 A. 85?

21 Q. 8554.

22 A. 8554. Okay.

23 Q. And this is an e-mail you sent to a Paul Feng and others
24 at Google; right?

25 A. Yes, it is.

1 **MR. HUESTON:** Okay. We move to admit this at this
2 time, Your Honor.

3 **MR. KRAVIS:** No objection.

4 **THE COURT:** It's admitted.

5 (Trial Exhibit 8554 received in evidence.)

6 **BY MR. HUESTON:**

7 **Q.** Up on the screen I'm going to show you the bottom e-mail
8 on the first page to you from Karan Gambhir. Do you see that?

9 **A.** Yeah, I do.

10 **Q.** Okay. And at the bottom of his e-mail, he writes, quote
11 (as read):

12 "As it is still at an initial stage, would be timely
13 to talk to YouTube to align them to our policy on digital
14 content apps using Google Play Billing exclusively for
15 payments. It is an extremely tough conversation
16 externally when partners point out that Google apps
17 themselves do not follow our policy."

18 Do you see that?

19 **A.** I do.

20 **Q.** All right. So let's go back to the demonstrative and put
21 that reason up on our chart.

22 And so we've just added yet another developer concern,
23 "Google apps themselves do not follow our policy." Do you see
24 that?

25 **A.** I see that.

1 Q. Okay. And, in fact, Google was so reluctant to use
2 Google Play Billing that you considered faking it to make
3 YouTube's billing flow look like Google Play Billing even
4 though it wasn't actually using Google Play Billing; right?

5 A. Faking it? Did we?

6 Q. Well, let's -- let me --

7 A. I'm sorry. You said Google wasn't using Google Play
8 Billing. You mean YouTube; correct?

9 Q. YouTube.

10 A. Let's be clear. Okay. Great.

11 Q. It was reluctant to use Google Play Billing?

12 A. That's right.

13 Q. And that was enough of a problem that you considered
14 faking it to make the billing flow look like Google Play
15 Billing even though it wasn't actually using Google Play
16 Billing. Do you remember that?

17 A. We considered a lot of different options in this case. I
18 think it's also -- sorry. I know you don't want me to get into
19 a lot of detail.

20 Q. Well, just that was one of the options that you
21 considered?

22 A. We considered what the interface looked like on YouTube
23 and whether or not there was a way for YouTube interface to
24 match Google Play Billing.

25 Q. To look like it even though it wasn't using Google Play

1 Billing; right?

2 A. Yes.

3 Q. Yes.

4 A. We considered that.

5 Q. And so let's just go to Exhibit 8555. Let's pull it up.

6 It's already in another e-mail chain you're on. Subject line:

7 "Re Reviewing YouTube payment flow as part of the policy work."

8 Do you see that?

9 A. Yes.

10 Q. And in the middle of the page, Larry Yang writes he has
11 reviewed the YouTube billing flows and have a proposal for what
12 needs fixing and what doesn't; right?

13 A. Yes.

14 Q. And he asks you if you would like to join because he
15 recalls that, quote, "This was flagged as a risk from business
16 development or policy"; right?

17 A. That's what he wrote, yes.

18 Q. And then you respond to that. Let's go to that. You
19 respond (as read):

20 "This is a risk insofar as YouTube sets an example
21 for the developer ecosystem. So if we can get them
22 looking like Google Play Billing, it eliminates the 'but
23 Google's own apps aren't using it' argument and just makes
24 things a bit cleaner."

25 That's what you wrote; right?

1 A. I did write that.

2 Q. So the plan was, as one of the options, to get YouTube to
3 look like Google Play Billing even though they weren't still
4 using Google Play Billing; right?

5 A. It was to have YouTube interface match the Google Play
6 Billing interface. They were, in fact, actually on the same
7 platform, but -- so we were trying to figure out how we could
8 match the look of YouTube. It's a bit more complicated but,
9 yes, that is what I wrote.

10 Q. That is what you wrote?

11 A. It is.

12 Q. Because this is September of 2017, well before we
13 established earlier YouTube still wasn't using Google Play
14 Billing then and in 2018; right? We already covered that.

15 A. Yeah. I don't know when they -- when they switched to
16 Google Play Billing, but it was sometime. This was before they
17 switched.

18 Q. This was before they switched?

19 A. That's right.

20 Q. And so what you wrote is "Let's get YouTube to look like
21 Google Play Billing"; right?

22 A. That is what I wrote.

23 Q. All right. Now, you also heard concerns that developers
24 did not want to grant Google access to their sales and billing
25 data. That was another concern that was raised; right?

1 **A.** Yes, that was one of the concerns.

2 **Q.** And, in fact, developers had concerns that Google would
3 use that data to gain a competitive advantage; right?

4 **A.** That was what they were worried about, yes. We wouldn't
5 do it, but that's what they were worried about.

6 **Q.** It's their worry; and so, for example, Spotify told you
7 that they were worried about YouTube's music business and that
8 providing data about their subscriptions to Google would
9 present a conflict of interest or would somehow be used by
10 Google in conflict with their business interests. Do you
11 remember that?

12 **A.** I don't remember that. Maybe you can point me to it.

13 **Q.** Let's go to your deposition.

14 **MR. HUESTON:** Your Honor, deposition page 327,
15 line 13, to 328, line 5.

16 (Pause in proceedings.)

17 **THE COURT:** That's fine.

18 **MR. HUESTON:** Okay. Let's put it up and I'll just --
19 on the screen.

20 **BY MR. HUESTON:**

21 **Q.** (as read):

22 **"QUESTION:** It says Spotify has concerns providing data to
23 subscriptions management center. What is the
24 subscriptions management center?

25 **"ANSWER:** I believe this references the place within

1 Google Play or potentially Android as a whole. I'm not
2 sure which. A user would go to see what they are
3 subscribed to and manage those subscriptions, cancel,
4 pause, reinstate, et cetera.

5 **"QUESTION:** Okay. It says 'Conflict of
6 interest/competition concerns.' Do you know what that
7 refers to?

8 **"ANSWER:** I believe this is them being worried about
9 YouTube's music business and being concerned that
10 providing data about their subscriptions to Google would
11 somehow present a conflict of interest or be somehow used
12 by Google in conflict with their business interests."
13 That's what you said; right?

14 **A.** Yeah.

15 **Q.** Okay. So let's go back to the demonstrative and put that
16 concern on the list, Demonstrative 6.

17 And now we've added "Worried about providing data to
18 Google." That was yet another developer concern; correct?

19 **A.** Yes.

20 **Q.** All right. Now, we've discussed multiple concerns that
21 developers had about Google changing its policy to require that
22 they use Google Play Billing; right?

23 **A.** That's right.

24 **Q.** And, again, according to Google, it was your job to help
25 developers; right?

1 A. That's right.

2 Q. And Google even touted you as being in the developers'
3 corner. Do you remember that?

4 A. I was a develop -- I presented the developer point of view
5 to the company, yeah, and represented the developer in company
6 conversations.

7 Q. Well, in fact, you recall Google describing you as being,
8 quote, "in the developer's corner"? Do you remember
9 representations like that?

10 A. That is how we think about BD; but to be fair, like not
11 all developers have good intent, so I'm not always in -- I'm
12 not, like, always in the developers' corner. I am there to
13 represent developers' questions and feedback and interests and
14 bring it to the team to share their feedback on the things that
15 we're doing.

16 Q. Okay. Well, let's go to Exhibit --

17 THE COURT: Before you do that, 8555 is not in
18 evidence yet.

19 MR. HUESTON: All right. Sorry, Your Honor. We'd
20 move that into evidence at this time. Thank you.

21 MR. KRAVIS: No objection.

22 THE COURT: It's admitted.

23 (Trial Exhibit 8555 received in evidence.)

24 THE COURT: Okay. Go ahead.

25 \\\

1 **BY MR. HUESTON:**

2 **Q.** Let's now look at Exhibit 8573 in your binder.

3 And looking at the cover page, you'll recognize this as a
4 deck used to onboard new people; right?

5 **A.** Yeah.

6 **MR. HUESTON:** Move this into evidence at this time.

7 **MR. KRAVIS:** This one I object. It was not a
8 disclosed exhibit.

9 **MR. HUESTON:** It's impeachment, Your Honor. We're
10 going to get the "in your corner," which is part of this.

11 **THE COURT:** Which page?

12 **MR. HUESTON:** That page will be on page 270 after I
13 show references to her in some earlier slides.

14 **THE COURT:** Okay. It's just that one page?

15 **MR. HUESTON:** That's what I'll get to after I show
16 Slide 265 with -- that features her.

17 **THE COURT:** I will admit the three slides you use
18 only.

19 **MR. HUESTON:** Let's see, so if I -- there's one --

20 **THE COURT:** Whatever they are, but just only the ones
21 you mention.

22 **MR. HUESTON:** Your Honor, may I just -- one other
23 slide to make sure this all --

24 **THE COURT:** Do as many as you want, but I will admit
25 only the ones you use.

1 **MR. HUESTON:** Just the ones I'm going to. That's
2 great. Thank you.

3 **BY MR. HUESTON:**

4 **Q.** So let's now go to Slide 265.

5 **A.** Sorry. What --

6 **Q.** We can put that one up on the screen actually to make it
7 easy.

8 And here's the slide. This is a slide about you; right?
9 "Who am I"?

10 **A.** That is.

11 **Q.** Okay. And that's because you would be one of the
12 presenters during onboarding from time to time; right?

13 **A.** I was at one time at least, yeah. I'm not sure if I did
14 it more than that.

15 **Q.** Okay. And on the very next page -- let's go to that
16 one -- it says "Global BD team to help developers"; right?

17 **A.** Yes.

18 **Q.** And your picture is there on the left there under "Apps";
19 right?

20 **A.** That's right.

21 **Q.** Now let's go to page 270, and this says, quote (as read):

22 "Our team gets in the ring. We're in the developers'
23 corner."

24 That's what you tell new hires; right?

25 **A.** We tell the new hires a lot of things about what we do,

1 and one of the things we do is represent developers; and
2 insomuch as that, we are in the developers' corner.

3 Q. Right.

4 A. We're one of the only teams in the organization that works
5 directly with developers.

6 Q. Sure. Black-and-white simple message (as read):

7 "We're in the developers' corner with a boxing ring
8 corner."

9 Right? You're there; right?

10 A. That's what that says.

11 Q. Okay. Well, it's the onboarding presentation that you
12 participated in; right?

13 A. Yep.

14 Q. Okay. Now, after you heard about the developers' concerns
15 and you shared them with your coworkers at Google, Google went
16 ahead and changed its billing policy to require Google Play
17 Billing, didn't it?

18 A. Some years later, yes.

19 Q. Okay. And, again, the truth is you didn't consider it
20 part of your job to ensure fairness when dealing with
21 developers; right?

22 A. I didn't -- can you restate that? What do you mean?

23 Q. Sure. You didn't consider it part of your job to ensure
24 fairness when dealing with developers even though you were
25 portrayed as being in their corner; right?

1 **A.** I would disagree with the characterization that I didn't
2 want to have a fair developer ecosystem.

3 **Q.** Okay.

4 **MR. HUESTON:** Your Honor, page -- deposition page 73,
5 lines 9 to 15.

6 (Pause in proceedings.)

7 **THE COURT:** That's fine.

8 **MR. HUESTON:** Okay. Let's play the video.

9 (Video was played but not reported.)

10 **BY MR. HUESTON:**

11 **Q.** And, Ms. Rasanen, so doing your job to the best of your
12 ability did not involve considering whether you thought Play's
13 conduct to developers was fair; right?

14 **A.** My job was not to determine whether Play's conduct was
15 fair or not fair. My job was to work with developers to create
16 great apps for the ecosystem -- for the platform for Android
17 and to make sure the developers were following our policies. I
18 didn't write the policies.

19 **Q.** Right. So even though you've been described as being in
20 the developers' corner, it wasn't part of your job, as you've
21 described it, to consider fairness to developers; right,
22 Ms. Rasanen?

23 **A.** It really was not part of my job to consider the fairness
24 element for developers. It was -- I was there to represent
25 their feedback and points of view as you have shown, and I

1 think I did that pretty well, but I wasn't making the policies.

2 Q. Okay. Let's move to a different topic.

3 We've heard a lot of testimony in this trial about
4 competition between Apple and Android, but I want to ask you
5 specifically.

6 You understand that Android dominates the market for
7 smartphones; right?

8 A. Android has more smartphone users than Apple does, yeah --

9 Q. Well --

10 A. -- today.

11 Q. -- not just like 51 percent to 49 percent. In fact, about
12 85 percent of smartphones are Android phones; right?

13 A. I don't believe so today; but several years ago, yes, that
14 was true.

15 Q. Well, at least as of a board of directors presentation in
16 2020, that was true; right?

17 A. Yes. If you show me that and it says that, then, yes,
18 that was what was represented to the board.

19 Q. Let's briefly look at that.

20 A. Sure.

21 Q. Lets go to Exhibit 436. And you'll see the front page
22 titled "Board of Directors Update January 2020"; right?

23 A. I'm sorry. I'm still getting there.

24 (Witness examines document.) Okay. Yep.

25 MR. HUESTON: We'd move this into evidence at this

1 time.

2 **MR. KRAVIS:** No objections to 436.

3 **THE COURT:** It is admitted.

4 (Trial Exhibit 436 received in evidence.)

5 **BY MR. HUESTON:**

6 **Q.** Okay. And let's go to Slide 14 of this, and it states in
7 this slide to the board of directors at Google (as read):

8 "Android has 85 percent share of global smartphones
9 with over 2.4 billion active devices."

10 Right?

11 **A.** That's what it says.

12 **Q.** Okay. And the users of those 2.4 billion active devices,
13 they can't use the Apple App Store, right, if they've got a
14 Google phone?

15 **A.** Correct. Apple App Store doesn't work on Google phones.
16 Only Apple phones.

17 **Q.** Right. The only way an Android user can use the Apple App
18 Store is by switching to an Apple iPhone; right?

19 **A.** As far as I know, that's right.

20 **Q.** Yeah. And you also know that there are lots of barriers
21 to switching between Apple and Android phones; right?

22 **A.** Yeah. Yes.

23 **Q.** And one of the primary reasons that Android users don't
24 switch to an Apple phone is cost; right?

25 **A.** That is one of the reasons, yeah, that's right.

1 Q. Cost is one of the primary reasons you've recalled; right?

2 A. Yeah, there are only a few.

3 Q. Okay. Well, we'll see if there's a few.

4 In particular, let's focus on this point (as read):

5 "IPhones typically have been more expensive than
6 Android phones, so it can be cost prohibitive for Android
7 users to switch to an iPhone."

8 Right? You agree with that statement; correct?

9 A. Yes.

10 Q. Okay.

11 A. Typically.

12 Q. Let's go to Rasanen Demonstrative 7.

13 So we're going to put this on a slide that we're going to
14 build called "Reasons People Don't Switch." And we've just
15 covered cost; right?

16 A. Yes.

17 Q. And we've covered that that was one of the primary reasons
18 you recalled; right?

19 A. That's correct.

20 Q. Okay. And that's because a smartphone is a big investment
21 that you know, and you know that people do not buy new phones
22 very often; right?

23 A. Yeah, that's right. Not -- I mean, you can tell me how
24 much "very often" is, but it is not something people do every
25 day, that's correct.

1 Q. Well, you recall that Google had studied this internally
2 at the time, and it was about once in every 2.8 years; does
3 that sound right?

4 A. That sounds about right, yeah.

5 Q. Great.

6 And so let's now build to the next part of the
7 demonstrative.

8 So another barrier to switching is time; right? People
9 keep their phones about 2.8 years on average; right?

10 A. Yeah. I don't know if I would call that a barrier to
11 switching, though.

12 Q. Okay.

13 A. Right? Do you know what I mean?

14 Q. Well -- and we'll get -- well, when people buy a new
15 phone -- let's explore that a little bit.

16 So if Android was interested in getting an Apple user to
17 switch to an Android phone, not everybody is ready to just jump
18 and switch to a phone; right?

19 MR. KRAVIS: Objection. Lack of foundation. Calls
20 for speculation.

21 THE COURT: Overruled.

22 Go ahead.

23 THE WITNESS: Can you say that again?

24 BY MR. HUESTON:

25 Q. Sure.

1 If, in fact, Google is interested in getting -- switching
2 in your favor, get an Apple iPhone user to come on over and
3 switch and buy an Android phone, one of the issues is that
4 people are not ready to just switch phones on a given day;
5 right? In other words, they're not switching phones every
6 month, every two months? As we just covered, it's once in
7 almost three years; right?

8 **A.** Yeah, it is. It's once every three years, but I guess my
9 position would be that you don't switch phones frequently
10 because there are other things that prevent you, not just
11 because of time; right?

12 You don't switch phones because, as you said, it is a big
13 investment, and so people don't make a big investment every
14 day. Not everyone can afford to.

15 So I don't think it's necessarily everyone just hangs onto
16 a phone for three years. There are reasons they don't switch.
17 I guess that's where I'm saying time is not a reason in and of
18 itself that people don't switch, if that's --

19 **Q.** Right, not in and of itself.

20 Let's look at other reasons besides cost which we just
21 covered.

22 So let's go to Exhibit 290, and you'll recognize this as a
23 January 2017 Google document titled "Pixel Switching Study."
24 Do you see that?

25 **A.** Yes. Sorry what was the timing?

1 Q. Yeah.

2 A. Yep.

3 Q. It's January 2017.

4 MR. HUESTON: Okay. We move this into evidence at
5 this time.

6 MR. KRAVIS: No objection.

7 THE COURT: It's admitted.

8 (Trial Exhibit 290 received in evidence.)

9 BY MR. HUESTON:

10 Q. And let's go scroll past Slide 2, which is just a table of
11 contents, to the very first substantive slide, Slide 3.

12 And it says, quote (as read):

13 "We know users approach switching smartphone brands
14 with caution."

15 Right?

16 A. Yes.

17 Q. And now let's go to the executive summary of this deck at
18 Slide 14. Do you see that?

19 A. I do.

20 Q. And the primary conclusions set forth here, as you've
21 recalled in testimony before, is that switching is not easy for
22 consumers; that is a multistep process and everyone goes
23 through something different when they're switching; right?

24 A. Yes.

25 Q. Okay. And so the first conclusion in this Google study is

1 that one of the hurdles is switching ecosystems; right?

2 A. That's right.

3 Q. So the consumer has to learn how to use both a new
4 operating system and a completely different new platform around
5 it; right?

6 A. Yes.

7 Q. And the second conclusion here in this Google study is
8 that learning a new operating system feels a lot like learning
9 a foreign language; right?

10 A. That's what it says on this slide, yeah.

11 Q. It's a Google slide; right?

12 A. Yeah.

13 Q. And the third point in this Google study is that it --
14 quote (as read):

15 "It really is not as easy as one, two, three to
16 switch."

17 Right?

18 A. Right.

19 Q. And below that it says (as read):

20 "Transferring data and setting a new phone on a
21 different operating system involves an average of 40 steps
22 and can take as long as nine hours if you use the Cloud."

23 Right?

24 A. That's what it says.

25 Q. And the next finding there is that, quote (as read):

1 "There is no one place within Google for help
2 switching to an Android device."

3 Right?

4 **A.** That's what it says.

5 **Q.** And the fifth finding is that (as read):

6 "A successful transfer of data does not by itself
7 equal a successful switch."

8 Right?

9 **A.** That's what it says.

10 **Q.** And for that reason there are a bunch of other things
11 you've testified that the user needs to learn for the switch to
12 be successful; right?

13 **A.** Yes.

14 **Q.** In fact, switching happens, as you've recalled it, in
15 three different phases, involving prep work, data transfer, and
16 then adapting to the new phone; right?

17 **A.** Is that how I recalled it in my deposition?

18 **Q.** Does that sound right?

19 **A.** It sounds right. I don't know if that's exactly how I
20 said it.

21 **Q.** That's close enough.

22 Let's go to Demonstrative 9 and put all the reasons we
23 just discussed from the Google document here as to reasons
24 people don't switch.

25 Switching phones equals switching ecosystems, it feels a

1 lot like learning a foreign language, transfer and setup
2 involves an average of 40 steps and nine houser, there's no one
3 place for help, and a successful transfer of data does not
4 equal a successful switch. We've just covered all those
5 reasons; right?

6 **A.** From this study, yes.

7 **Q.** Right.

8 And another one of the biggest reasons that users don't
9 switch is concerns about whether data will be lost during the
10 transfer from one platform to another; right?

11 **A.** (Witness examines document.) Sorry. Yes, that's right.

12 **Q.** So let's flip to Slide 5 of that deck.

13 In fact, that's what the Google document says. It states
14 that, quote (as read):

15 "Losing data is one of the biggest concerns with
16 switching."

17 Right?

18 **A.** Yeah, that's what this pixel switching study says.

19 **Q.** Right. So let's go back to the demonstrative and add
20 losing data as another barrier to switching.

21 Let's go back, Demonstrative 10, we've added that point;
22 right?

23 **A.** Yes, you've added that.

24 **Q.** And then back to the Google presentation.

25 That same slide we were on mentions learning a new

1 operating system, which we discussed earlier, apps/features
2 incompatible and phone spec inequality; right?

3 A. That's what this study says, yeah.

4 Q. And so let's just quickly add that to the demonstrative.
5 It's Demonstrative 11. We've just added that reason.

6 And yet another reason why IOS users in particular don't
7 switch is that they're very attached to key Apple features.
8 You understand that; right?

9 A. Yes.

10 Q. So in going back to the slide deck, that was also covered
11 in the study at Slide 7, it states, quote (as read):

12 "IOS users are very attached to key features in the
13 Apple ecosystem."

14 Right?

15 A. That's right.

16 Q. And what's featured here is iMessage, Facetime,
17 Apple Music, and emojis; right?

18 A. Yeah.

19 Q. Now, we don't see the Apple App Store here listed, do we?

20 A. We do not see the app store listed, no.

21 Q. Or any third-party apps listed here on this picture of the
22 key features that IOS users are very attached to; right?

23 A. That's right. Third-party apps being --

24 Q. If we can quickly go back -- thank you. Sorry to
25 interrupt.

1 A. It's okay.

2 Q. Quickly go back to the demonstrative and add that, users
3 are attached to key features. We just covered that as yet
4 another reason; right?

5 A. Yes.

6 Q. Okay. Now, beyond that Google study that we've just
7 covered and what we've just been listing here on the slide,
8 there are additional hurdles to switching; right?

9 A. Yeah, there may be. Yes. Yes, there are.

10 Q. Okay. Yeah. So you'll recall that a user's technical
11 acumen and habits could also be a hurdle to switching; right?

12 A. Yes. If you're not technically savvy, it can be hard.

13 Q. Okay. Let's quickly add that to the demonstrative, user's
14 technical acumen.

15 And another reason why users don't switch is because they
16 may have committed to products beyond just the phone; right?

17 A. Can you clarify?

18 Q. Other products in an ecosystem like in an Apple ecosystem.

19 A. Oh, sure, yeah. Like an Apple Watch, for example.

20 Q. Okay. And -- so let's go back to Exhibit 436, page 17,
21 and this is titled, quote, "Users are also buying into an
22 ecosystem, not just a mobile device"; right?

23 A. That's correct.

24 Q. And you know that buying into an ecosystem means more than
25 just literally buying; right? It means consumers investing in

1 or using many different devices with one of these ecosystems;
2 right?

3 **A.** Yes. Within one operating system or ecosystem, yeah.

4 **Q.** And so the conclusion in this deck is that users who have
5 more than one Apple device or service are much less likely to
6 switch to Android; right?

7 **A.** That's right.

8 **Q.** And so for instance looking at the blue bar, it shows --
9 it's a little hard to see, but I think you can see (as read):

10 "94 percent of Apple iPhone users who also own an
11 Apple Watch will likely choose an iPhone for their next
12 phone."

13 Right?

14 **A.** That's right.

15 **Q.** And if we go to the last bar (as read):

16 "If a person owns more than that, an iPhone, an
17 iPad, an Apple TV, and an Apple Watch, now we're almost
18 100 percent certain they will not switch to another
19 operating system."

20 Right?

21 **A.** That's what this says, yeah.

22 **Q.** And like Apple, the Android ecosystem also includes
23 hardware devices aside from just Android phones; right?

24 **A.** The Android ecosystem does, yes.

25 **Q.** Yeah. You've got your own watches, tablets, and TVs;

1 right?

2 **A.** It's a little bit different but, yes. They're Android.

3 **Q.** Sure. You've got your Android ecosystem; right?

4 **A.** Yeah. It's not the same as Apple, but it is Android's
5 ecosystem.

6 **Q.** Of course, yes.

7 And let's go to Demonstrative 14 and add "committed to
8 other devices in the ecosystem." That's what we've just
9 covered; right?

10 **A.** That's what we just covered.

11 **Q.** Okay. So now let's go to a related topic.

12 Because of these barriers, the many that we've covered,
13 you know that very few people switch between Android and Apple
14 when they purchase a new phone; right?

15 **A.** Very few people?

16 **Q.** Right.

17 **A.** I mean, millions of people. I don't know how we qualify
18 "very few." Maybe we should get into the numbers.

19 **Q.** Let's do that. Let's quantify that.

20 So let's go to Exhibit 1766 in your binder.

21 **A.** Okay.

22 **Q.** And you should recognize that as a presentation entitled
23 "Android Consideration, Likely Purchasers and Recent
24 Purchasers"; right?

25 **A.** Yes.

1 **MR. HUESTON:** We move this into evidence at this time.

2 **MR. KRAVIS:** No objection.

3 **THE COURT:** It is admitted.

4 (Trial Exhibit 1766 received in evidence.)

5 **BY MR. HUESTON:**

6 **Q.** So if we go to the second page entitled "Study Timeline."

7 And this study was conducted, according to the timeline,
8 from about March of 2021 through September of 2021; right?

9 **A.** That's right.

10 **Q.** Okay. Now let's go to Slide 14, and this slide is called
11 "Likely Purchasers, March 2021, Key OEM and OS Metrics"; right?

12 **A.** Yes.

13 **Q.** If you look at the bottom right table called "Lower Funnel
14 Metrics of Potential Switchers," we see a yellow column showing
15 how many likely purchasers were considering other operating
16 system; right?

17 **A.** Yes.

18 **Q.** All right. And there's reference -- Apple IOS would be an
19 operating system; right?

20 **A.** Yes.

21 **Q.** So coming back up to the slide here, the yellow column
22 indicates that only 17 percent of people who responded to the
23 survey and had an Android phone had even considered purchasing
24 an Apple iPhone; right?

25 **A.** That's what it says, yes.

1 Q. And you'll agree with me that people consider doing lots
2 of things they don't end up doing; right?

3 A. Yes, I agree with that.

4 Q. Right. And sometimes one of the reasons why people don't
5 actually do something that they considered is there are
6 barriers in the way; right?

7 A. Yes.

8 Q. And so we discussed already numerous barriers that will
9 prevent or discourage people from switching from Android to
10 Apple phones. That was the chart we covered; right?

11 A. Yep.

12 Q. And here in this, study only a subset of the people who
13 considered switching actually took the next step and said that
14 they intended to do so; right?

15 A. That's right.

16 Q. Right. So if we look at the orange column, it reports
17 that only 7 percent of the people who had an Android device and
18 were likely purchasers of a new smartphone intended to switch
19 to Apple; right?

20 A. That's right.

21 Q. And on the other side of that, only 9 percent of people
22 who had an Apple device and were likely purchasers of a new
23 smartphone intended to switch to Android; right?

24 A. That's right.

25 Q. And if we go to "Key Takeaways" on Slide 8, "Key Takeaways

1 under "Switchers"; do you see that?

2 A. I see that.

3 Q. It says (as read):

4 "Device users are loyal to their operating system."

5 Right?

6 A. Yes.

7 Q. That was the takeaway under "Switchers" for this study;
8 right? The key takeaway?

9 A. Yes.

10 Q. And then it repeats the statistic we just looked at: In
11 the U.S. 9 percent of likely smartphone purchasers currently
12 using iPhones intended to switch to Android while 7 percent
13 of current Android users intend to switch to iPhones; right?

14 A. Yes.

15 Q. Keep those numbers in mind. We'll go to a new
16 demonstrative now. We're numbering this 15.

17 And just put those numbers up.

18 This is what we just looked at, the Exhibit 1766, and
19 percentage of those switching 7 to 9 percent. That's what we
20 just saw; right? We saw the 7 percent number intend to switch
21 and 9 percent; right?

22 A. Yes. That intend to, yeah, that's right.

23 Q. That's right.

24 So staying with the study, going back out of the
25 demonstrative back to the deck, let's go to Slide 17, which is

1 entitled "Recent Purchasers March 2021." Do you see that?

2 **A.** I do.

3 **Q.** And going to the lower right box, the one called
4 "Switchers," and this shows the percentage of recent phone
5 purchasers who actually switched operating systems, that it was
6 less than half of what folks were considering, ranging between
7 6 and 12 percent; right?

8 **A.** That's right.

9 **Q.** Okay. And so let's go to the demonstrative and put that
10 up there because you recall there were several studies that
11 Google did on this; right?

12 **A.** Yes, I do.

13 **Q.** All right. So we've just shown that range there, 6 to
14 12 percent.

15 Now let's look at another Google study about switching
16 that was done.

17 Let's go to Exhibit 1768, which you should find in your
18 binder there, and recognize as a June 2020 presentation
19 entitled "Android Brand Health." Do you see that?

20 **A.** I do.

21 **MR. HUESTON:** We move this into evidence at this time.

22 **MR. KRAVIS:** No objection.

23 **THE COURT:** It's admitted.

24 (Trial Exhibit 1768 received in evidence.)

25 \\\

1 **BY MR. HUESTON:**

2 **Q.** Let's go to page 6 of this exhibit.

3 And this slide explains why even though we saw a larger
4 percentage of people considering the other operating system,
5 the actual intent to switch is, in words here in bold,
6 incredibly low; right? Those are Google's words on this slide;
7 right?

8 **A.** That's right.

9 **Q.** And it says in Google's own words (as read):

10 "While owners may consider the other operating
11 system, the intent to use the operating system is
12 incredibly low. Potentially driven by high switching
13 costs and/or loyalty to their existing operating system."
14 Do you see that?

15 **A.** I see that.

16 **Q.** And so this slide explains, right, what we were just
17 discovering with the other study; that very few people who
18 consider another operating system actually intend to switch?
19 Right?

20 **A.** A low percentage.

21 **Q.** Yeah. Well, in their words, "incredibly low"; right?

22 **A.** In their words, yeah.

23 **Q.** And "their words" is Google's words; right?

24 **A.** In this particular study, yes, that is right.

25 **Q.** Okay. Now let's look at the use intent section of the

1 chart, and the question that those results are showing is,
2 quote (as read):

3 "Which one of the following smartphone operating
4 systems would you most likely choose?"

5 You see the language there in the legend?

6 A. I do.

7 Q. And the chart shows that only 4 percent of current IOS
8 users report being most likely to use an Android device in the
9 future; right?

10 A. Right. I'm just orienting myself.

11 Q. Sure.

12 A. Can you say that again?

13 Q. Sure.

14 The chart shows, if you look right above that legend
15 there, that only 4 percent of current IOS users -- see the
16 black there and the 4 percent in black? And you look to the
17 legend on the right, it says --

18 A. Yeah. Yeah.

19 Q. So 4 percent of current IOS users report being more likely
20 or most likely to use an Android device in the future; right?

21 A. Yes, 4 percent.

22 Q. Okay. And then, similarly, the chart shows that only
23 6 percent of Android owners reported that they would most
24 likely choose an Apple device; right?

25 A. Yeah. 6 percent of Android would go to Apple, yeah.

1 Q. Okay. So let's go back to the demonstrative and put those
2 figures up so we have them all in mind.

3 So back to -- now we're at Demonstrative 17, and we've
4 added from this study, Exhibit 1768, 4 to 6 percent; right?

5 A. That's right.

6 Q. And let's look at just one more internal Google data
7 point.

8 I'm going to show you Exhibit 1764. It's actually an
9 Excel spreadsheet, but I'm just going to show you a screenshot.
10 It's there in the binder, and I think you're going to recognize
11 that.

12 A. 1764?

13 Q. Yeah. This is -- this is something that we've --

14 MR. HUESTON: One moment, Your Honor, if I may.

15 (Pause in proceedings.)

16 BY MR. HUESTON:

17 Q. And this is, in fact, a spreadsheet that you are familiar
18 with; right?

19 A. Yes, I am. Yes. I was educated on this, yes.

20 Q. Yeah.

21 MR. HUESTON: So we'd move this into evidence at this
22 time.

23 MR. KRAVIS: So I do have an objection here. Not to
24 the spreadsheet, but I haven't seen this screenshot before. It
25 wasn't disclosed to us this way. I'm happy to look at it at

1 the break, but I don't know what this is.

2 **THE COURT:** Oh, okay.

3 **MR. HUESTON:** We're not going into the screenshot.

4 **THE COURT:** Good news. It's time for the morning
5 break anyway.

6 So I'll see is you back at 11:05. All right? And I'll
7 clean all this up before you get back.

8 **THE CLERK:** All rise.

9 (Proceedings were heard out of the presence of the jury:)

10 **THE COURT:** Okay. The witness can step out.

11 No communications about your testimony, please.

12 What is the issue? Please don't give the big speeches.
13 Just hand up and say whatever your concern is.

14 Okay. What's the issue?

15 **MR. HUESTON:** I think I can put this to rest. I
16 showed the screenshot just so she could identify it. I'm
17 actually just going to go into the Excel and pull out some
18 figures.

19 **MR. KRAVIS:** Oh.

20 **MR. HUESTON:** I'm not going to enter it. It was just
21 for her to identify, "Oh, yes, I looked at this Excel." So I'm
22 not moving that screenshot into evidence.

23 **MR. KRAVIS:** Okay. I mean, I will say I'm not
24 certain -- this is the 30(b)(6) witness. It's the corporate
25 representative.

1 We have no objection to the admission of the spreadsheet.
2 I'm not certain whether she will recognize it in this form. I
3 know she's familiar with the full spreadsheet. I have no
4 objection to it -- but we have no objection to its admission.

5 **THE COURT:** All right.

6 **MR. HUESTON:** And I'm only going to point out a couple
7 things that she testified to.

8 **THE COURT:** It's admitted over no objection.

9 (Trial Exhibit 1764 received in evidence.)

10 **THE COURT:** So, Mr. Hueston, I want you to give me,
11 not necessarily now but today, Exhibits 1764, 1766, and 1768 in
12 a blown-up -- I can't read these.

13 **MR. HUESTON:** Okay. Will do, Your Honor.

14 **THE COURT:** And I have good vision. Just for me.

15 **MR. HUESTON:** I will.

16 **MR. KRAVIS:** I'm sorry, Your Honor. May I raise one
17 more issue with respect to this witness?

18 **THE COURT:** Yes.

19 **MR. KRAVIS:** This witness was Google's corporate
20 representative, and so I have not objected to the admission of
21 the studies here. She was prepared on them as part of her role
22 as corporate representative.

23 I would like to ask her about just one additional study
24 that she was also prepared on. I'm raising it with the Court
25 now because the foundation is a little bit different. It's not

1 something she used in her personal --

2 **THE COURT:** Well, why don't you -- have you talked
3 about it?

4 **MR. HUESTON:** Well, we tried to speak last night,
5 Your Honor, and our objection is --

6 **THE COURT:** Which one is it? Is it in here?

7 **MR. HUESTON:** He'll have to pull it up. It's a study
8 that she will admit she had no familiarity with and, in fact,
9 did not testify about it at her deposition.

10 And what I understand Google wants to do from the meet and
11 confer is have her bring this hearsay document in that she has
12 no familiarity with, which is entitled "A Perspective on
13 Android Prioritization" with legend notes. You can tell it's a
14 draft only, "A Perspective. Please provide feedback
15 throughout."

16 She will have to admit she didn't provide any feedback,
17 know anything about this. And my understanding is Google is
18 now going to try to make a point, bring in hearsay as opposed
19 to the admissions that we get to do through a 30(b)(6) that
20 wasn't something part of deposition, that she has no part of,
21 to make an affirmative point.

22 **THE COURT:** You can try to lay a foundation; but if
23 she hasn't seen it before, hasn't worked on it, and the other
24 factors, then, you know, I probably won't allow it.

25 **MR. KRAVIS:** Well, she has seen it before in the

1 course of preparing as a 30(b)(6) witness. This was --

2 **THE COURT:** She wasn't deposed on it, though. They
3 didn't ask her to testify about it; correct?

4 **MR. KRAVIS:** Well, to be clear Epic did identify this
5 as one of the documents that they asked her to prepare on in
6 her capacity as the 30(b)(6) witness. They identified 14
7 documents they wanted her to be prepared on, and this was one
8 of them.

9 **MR. HUESTON:** Well, it never came up at all in the
10 deposition. There was no testimony about it and, Your Honor,
11 for good reason. There's nothing in here for us as an
12 admission, and it would be improper to take some 30(b)(6) who's
13 never testified about this and try to use that as a vehicle to
14 bring in self-serving hearsay on a document that she can't even
15 explain.

16 **MR. KRAVIS:** But that was their choice. They chose
17 the documents on which to educate the corporate representative.

18 **THE COURT:** Well, I know, but you have control over
19 every Google witness. You could have brought in the person who
20 actually knew something about that. So the objection is
21 sustained.

22 Let me ask you a question. Why are these copies all so
23 bad? Why were they produced that way?

24 **MR. HUESTON:** That's the way they were produced,
25 Your Honor.

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1 **THE COURT:** How is that even possible?

2 **MR. HUESTON:** Believe me, I'd love to actually create
3 them more crisply. We do the best we can.

4 **THE COURT:** I'm concerned about the jury not being
5 able to read these things back in the jury room.

6 **MR. HUESTON:** Agree. We'll try even harder.

7 **THE COURT:** I don't understand how documents that
8 should have been razor clear got produced this way, but we're
9 going to have to have something that is intelligible to the
10 jury on the admitted evidence USB drive.

11 These are -- I cannot read them, and I suspect that the
12 jury is not going to be able to do it either. Okay? And I
13 don't want to have to require people to use glasses or
14 magnifying devices or anything else.

15 **MR. HUESTON:** Got it.

16 **THE COURT:** You're going to have to work something
17 out.

18 **MR. HUESTON:** We will.

19 **THE COURT:** All right. See you at 11:05.

20 **THE CLERK:** All rise. Court is in recess.

21 (Recess taken at 10:52 a.m)

22 (Proceedings resumed at 11:05 a.m)

23 (Proceedings were heard in the presence of the jury:)

24 **MR. HUESTON:** Thank you, Your Honor.

25 \\

1 **BY MR. HUESTON:**

2 **Q.** Ms. Rasanen, we're now going to pull up that Excel
3 spreadsheet on your screen.

4 **A.** Okay.

5 **Q.** And we're going to go to the switching problem tab, and
6 we're going to go to column Y, which you testified about in
7 your deposition.

8 But column Y, row 41, do you recall that showed
9 92.9 percent of Android users worldwide who got new phones were
10 expected to stay on Android; right?

11 **A.** (Witness examines document.) Yes.

12 **Q.** Okay.

13 **A.** Yes. Sorry. I'm just orienting myself on this
14 spreadsheet again.

15 **Q.** Of course. Fair enough.

16 And only 6.93 percent of Android users who get new phones
17 are expected to switch to IOS. That's what this showed; right?

18 **A.** That's what this showed, yeah.

19 **Q.** Okay. So now quickly back to finish our demonstrative,
20 Demonstrative 18. Let's put that number on the slide.

21 We just covered 1764, 6.9 percent; right? Do you see
22 that?

23 **A.** Yes.

24 **Q.** Okay. And so just staying on this demonstrative for a
25 moment, we've seen there are four entries, but it's three

1 different studies here showing four different statistics;
2 right. The first two are Exhibit 1766. That was the first
3 study.

4 A. Yes.

5 Q. And then there were two other studies. A total of three;
6 right?

7 A. That's right.

8 Q. None of these studies examined how many users who switch
9 because Google Play Store is better or worse than the Apple App
10 Store; right? You saw nothing like that in these studies?

11 A. I don't think so, but we didn't go over all of them, but I
12 don't think so.

13 Q. Yeah. We haven't seen any of that; right?

14 A. Not today, no we haven't.

15 Q. And, in fact, these studies included users who switched
16 for any reason at all; right?

17 A. That's right.

18 Q. Right. These studies included people who switch because
19 of a phone's cost. We covered that; right?

20 A. Yes. Some of the studies included that, yes.

21 Q. Or they switch because of hardware difference; right?

22 A. Yes.

23 Q. Or user interface, if they're comfortable with something
24 or not; right?

25 A. Yes.

1 Q. Or what their family or friends recommend; right?

2 A. Yes.

3 Q. Or any other of a number of reasons that don't involve an
4 app store; right? That's what we've been reviewing here today;
5 right?

6 A. That's right.

7 Q. In fact, the same studies we just looked at show that
8 people primarily buy smartphones for reasons other than the app
9 store; right? That's what we've reviewed?

10 A. I don't know that we reviewed studies that say why they
11 buy. We talked about why they switch or don't switch.

12 Q. Well, let me show you one then.

13 A. Sure.

14 Q. Let's go to Exhibit -- it's already in -- 1766, and let's
15 go to a slide that addressed that.

16 This is Slide 37, and this one says on the left, right,
17 "Top Reasons for Smartphone Purchase"? Do you see that?

18 A. Yes.

19 Q. And the top reason is "I like the smartphone brand";
20 right?

21 A. That's right.

22 Q. The next one says "My prior smartphone stopped working or
23 slowed down"; right?

24 A. Yes.

25 Q. Third and fourth reasons are about price; right? Do you

1 see that?

2 **A.** I see.

3 **Q.** And if you keep going all the way down the list of top
4 reasons, nowhere in that list is the app store identified as a
5 reason for purchasing a smartphone; right?

6 **A.** The app store, no.

7 **MR. HUESTON:** Pass the witness.

8 **THE COURT:** Okay. Mr. Hueston, are you going to move
9 these charts into evidence?

10 **MR. HUESTON:** Yes, Your Honor, we would move those
11 charts into evidence.

12 **THE COURT:** All right. Any objection?

13 **MR. KRAVIS:** No objection.

14 **THE COURT:** Okay. Those are admitted.

15 **THE CLERK:** What exhibit number are they admitted
16 under?

17 **THE COURT:** Oh. How are we going to do that, Lisa?
18 We just moved these charts into evidence. What exhibit number
19 are we going to give them?

20 **THE CLERK:** 11409.

21 **THE COURT:** Okay. This will be 11409.

22 (Trial Exhibit 11409 received in evidence.)

23 **THE COURT:** Okay. Go ahead.

24 **MR. KRAVIS:** Thank you, Your Honor.

25 \\\

CROSS-EXAMINATION

BY MR. KRAVIS:

Q. Good morning, Ms. Rasanen.

A. Hello.

Q. Let me start by asking you a bit about your background.
When did you start working at Google?

A. I started working at Google in 2012.

Q. And I think I heard you testify earlier that sometime
around 2014 you became a strategic partner manager in the
Google Play Store. Did I hear that right?

A. That's right.

Q. Were there particular categories of partners that you were
focused on in that role?

A. In that role I was specifically focused on social and
music partners.

Q. What were -- what would be examples of social and music
partners that you were focused on in that role?

A. In my role, I was focused on Facebook, Twitter, Snapchat,
Pandora, iHeart Radio. The list goes on.

Q. And what were your responsibilities as a strategic partner
manager?

A. In 2014 when I joined, we were really focused on making
sure that key developers were launching apps on Android and not
only on IOS. And we were making sure that they were aware of
and using our Android platform products and features in their

1 apps. And then just helping them get their apps promoted in
2 the Play Store and, of course, that they were following all our
3 policies.

4 **Q.** I want to ask you about one exhibit that my colleague
5 showed you during his examination that refers to your role.

6 I'm going to direct you back to 8573. I can't put it up
7 on the screen, but I think you have it in the binder in front
8 of you.

9 **A.** One second.

10 **Q.** Okay.

11 **A.** Sorry. This is a monster.

12 (Witness examines document.) This is the onboarding
13 document?

14 **Q.** Yes.

15 **A.** Okay.

16 **Q.** The slide with the boxing ring.

17 **A.** Yes.

18 **Q.** Now, the text of the slide I think reads (as read):

19 "Our team gets in the ring. We're in the developers'
20 corner."

21 Can you just explain to the jury how you understood your
22 role with respect to developers as a strategic partner manager?

23 **A.** Yeah. My role was to be a direct interface with app
24 developers in the Play Store and work with them to help them
25 adopt our products and features and hear their feedback, and

1 bring that feedback back to the team so that we could
2 understand the developers' perspective.

3 **Q.** And why does the Google Play Store or why did, at the time
4 you were there, the Google Play Store have people who did those
5 kinds of things with developers as a strategic partner manager?

6 **A.** I think at the heart of it, it was really important for us
7 to make sure that we had all of the apps and games on the
8 platform, on Google Play, so that when Android users were
9 looking for something, that it was there and that it was good
10 and that it felt like a quality app on the platform.

11 **Q.** And the words on the slide "We were in the developers'
12 corner." Did you understand that to mean that as a strategic
13 partner manager, you were always just supposed to do whatever
14 the developer wanted?

15 **A.** No.

16 **Q.** How did you understand that?

17 **A.** We were supposed to represent the developers' point of
18 view and make sure that our team understood how developers were
19 using our products, our features, our APIs. We were making
20 sure that, you know, their feedback was heard and interpreted
21 and addressed to the best of our ability and when appropriate.

22 **Q.** And I think you previously testified that around 2017 you
23 took on a larger role?

24 **A.** I did, yes.

25 **Q.** And what were your responsibilities in that larger role

1 starting in 2017?

2 **A.** In 2017 I took on sort of broader management of the Play
3 business development team, specifically for apps and looking
4 after them, and then our scaled partner management organization
5 as well.

6 **Q.** And did there come a time around 2019 when you left the
7 Play Store team altogether?

8 **A.** Yeah. Early 2019.

9 **Q.** All right. I'd like to ask you now about the payments
10 policy. I think you got some questions about that in the
11 previous examination. Do you remember that?

12 **A.** Yes.

13 **Q.** And I'd like to show you again what has been entered into
14 evidence as Exhibit 1436. I think you've got your choice of
15 binders for this one. I think it might be in either one.

16 **A.** If we're going to stick with this one, I might as well
17 stay here for now. Okay.

18 **Q.** And, Ms. Rasanen, I think I heard you testify previously
19 that you recognize that as an older version of the payments
20 policy. Did I get that right?

21 **A.** Yeah. I think this is an older one than what the
22 policy -- this -- I know this is an older one than what the
23 policy is today.

24 **Q.** I'd like to ask you some questions now about the policy,
25 and I'd like to start, do you see about two paragraphs down it

1 references in-store purchases?

2 A. Yes.

3 Q. What are in-store purchases?

4 A. So an in-store purchase is when an app is available in the
5 Google Play Store but the consumer, the user, has to actually
6 buy it before they download it, and they -- so they can't use
7 it without paying for it first.

8 Q. And whose decision is it whether a user has to pay money
9 for a particular app before downloading it first in the
10 Play Store?

11 A. That's the developer's decision.

12 Q. Now, the sentence here reads (as read):

13 "Developers charging for apps and downloads from
14 Google Play must use Google Play's payment system."

15 What does that mean?

16 A. That means that if your app is distributed via Google Play
17 and you're charging users for your app or content of your app,
18 you must use Google Play's billing platform.

19 Q. And when the developer uses Google Play's payment system,
20 does Google collect a service fee on that transaction?

21 A. Yes.

22 Q. Now, let me direct your attention further down. There's
23 the words "in-app purchases." Do you see that?

24 A. Yes.

25 Q. What are in-app purchases?

1 **A.** So in this case the user can download the app for free,
2 and they can potentially -- they can use pieces of the app but
3 there are some things in the app that the developer wants the
4 user to pay for.

5 **Q.** And what would be, not all of them, but just one or two
6 examples of things that would fall in the category of in-app
7 purchases as you just defined it?

8 **A.** So, again, there's lots of things people can buy in an
9 app. People can buy swords or gems in a game. They can buy
10 like a subscription to the *New York Times*. They can also buy,
11 you know, batteries or lightbulbs from Amazon. Things like
12 that.

13 **Q.** Let me direct your attention to the first bullet under
14 "In-app Purchases." It reads (as read):

15 "Developers offering products within a game
16 downloaded on Google Play or providing access to game
17 content must use Google Play in-app billing as the method
18 of payment."

19 What does that mean?

20 **A.** That means that if a developer has designated their app as
21 a game, specifically in the game category within the
22 Play Store, they have to use Google Play Billing.

23 **Q.** That's games specifically?

24 **A.** That's games specifically.

25 **Q.** Now let me direct you to the next bullet (as read):

1 "Developers offering products within another category
2 of app downloaded on Google Play must use Google Play
3 in-app billing as the method of payment..."

4 And then it says "except for the following cases," we'll
5 get to that in a moment; but setting aside "except for the
6 following cases," what does the first part of that sentence
7 refer to? What does that mean?

8 **A.** This is basically saying that if a developer is not a game
9 but they are offering products for sale in their app, whether
10 it's digital or otherwise, they must use Google Play Billing.

11 Sorry. Not otherwise. Whether -- if it's a digital
12 product, they have to use Google Play billing.

13 **Q.** And as with the in-store purchases, if the developer uses
14 Google Play Billing for these in-app purchases, does Google
15 collect a service fee on the transaction?

16 **A.** Yes.

17 **Q.** Now I want to ask you about those exceptions, the second
18 exception listed there, but before I do that, I'd just like to
19 ask you about why the Play Store has this policy.

20 So other than like a one-time fee, when a developer puts
21 their app in the Play Store, does the developer pay Google any
22 upfront fee?

23 **A.** Only the first time as you mentioned.

24 **Q.** And what is the one-time first-time fee?

25 **A.** \$25.

1 Q. And when a user downloads a developer's app from the
2 Play Store, does the developer then have to pay Google a
3 per-download fee?

4 A. Not if they are not using -- if they're not a paid app.
5 In the first instance we talked about, yes; but for any
6 free-to-download app, they do not pay a fee.

7 Q. Okay. So if there's no upfront fee and there's no
8 per-download fee, then how does Google charge money for the
9 benefits that the Play Store provides to app store developers?

10 A. We charge a service fee for any developer that is charging
11 users directly within their app for digital content.

12 Q. And is that the payments policy we were just looking at?

13 A. Yes.

14 Q. Now, have you heard the expression "Google makes money
15 only when the developer makes money"? Have you heard that
16 before?

17 A. Yeah.

18 Q. What is your understanding of what that means?

19 A. So for us it's the principle of being aligned to developer
20 success. We want to help our developers. We know we help our
21 developers earn revenue, and so we align our interests with
22 theirs; and when they charge a user from within their app for
23 digital content used on a mobile phone, we recognize a share of
24 that fee, and that's our service fee.

25 Q. Now, I want to ask you about the second exception under

1 the second bullet.

2 Do you see where it reads (as read):

3 "Payment is for digital content that may be consumed
4 outside of the app itself; e.g., songs that can be played
5 on other music players"?

6 Do you see that?

7 **A.** I do.

8 **Q.** Now, that is listed as an exception to the billing policy.
9 Do I have that right?

10 **A.** You do.

11 **Q.** All right. What does that mean?

12 **A.** So this has been in the policy as long as I worked on the
13 store, and what this refers to is actually a little bit
14 archaic. It's when apps used to sell things like MP3s or
15 e-books that could be used outside of that app itself. So you
16 could take -- you could buy an e-book from Kobo as an app, and
17 then you could take that and you could use that somewhere else.
18 You could use it in a PDF reader on your laptop or you could
19 use it, you know, on your phone, but you didn't need Kobo to
20 consume that content.

21 MP3 is another example. You can buy an MP3 from -- I'm
22 forgetting the names of the apps that sold MP3s. Amazon at one
23 point sold MP3s. You could take that MP3, Amazon sells it to
24 you as a piece of content, a MP3 that you own, and you can then
25 use that MP3, play it anywhere you want: On your iPod or on

1 your, you know, laptop music player. It was not specifically
2 tied to the app where you bought it.

3 **Q.** And the example you were just using, the MP3, is that, in
4 fact, written into this version of the policy?

5 **A.** It is.

6 **Q.** Now I'm going to ask you some more questions about this,
7 and just for ease of reference on my questions I'm going to
8 call this the outside-the-app exception. Okay?

9 **A.** Okay.

10 **Q.** Okay. Now, did there come a time when you were working in
11 the Play Store when some developers who sold subscriptions in
12 their apps told Google that those developers believed that this
13 exception applied to them?

14 **A.** Yes.

15 **Q.** And can you give just one or two examples of developers
16 that you worked with who fall into that category who told
17 Google that they believed this exception applied to them?

18 **A.** Yes. Spotify was one of them. The Match app was one of
19 them.

20 **Q.** So I just want to be clear about what this means,
21 exception means. I'm going to use Match as an example.

22 In the ordinary course, under the payments policy with no
23 exception, how would Google collect a service fee for the
24 benefits that the Play Store provides to Match?

25 **A.** In the ordinary course with no exception, they would --

1 Google would have collected a share of the paid services that
2 Match offered through its Android app.

3 **Q.** And so when Match took the position that this
4 outside-the-app exception applied to them, then how did Match
5 process the transaction when a customer bought something inside
6 their Android app in the Play Store?

7 **A.** They used their own billing -- their own billing platform,
8 their own billing service.

9 **Q.** So in that circumstance when Match took the position that
10 the outside-the-app exception applied to them, did Google
11 collect any service fee from Match?

12 **A.** No.

13 **Q.** By the way, during this time period, did the Apple App
14 Store have a similar or comparable outside-the-app exception?

15 **A.** No.

16 **Q.** Now, in your role as a strategic partner manager, did you
17 participate in conversations with some of these app developers
18 about this issue, why they believed the exception applied to
19 them?

20 **A.** I did.

21 **Q.** And what did those developers tell you about why they
22 believed this exception applied to them?

23 **A.** They believed that because they had a website, that was
24 covered in the exception; that it was -- the service could be
25 used outside of the app on the web -- in their own website on

1 the web.

2 **Q.** So in that interpretation, the service they buy in the app
3 and use on the web is a little like the MP3 example you gave
4 earlier?

5 **A.** No, not really. Because if you buy Match -- a
6 subscription for a Match service, you can't use that in another
7 dating service or another app or another service anywhere. You
8 have to go to Match website in order to use it.

9 **Q.** Okay. So I asked you about the position you heard from
10 app developers.

11 During this time period, so your work in the Play Store,
12 what was Google's position as to whether this outside-the-app
13 exception applied to the developers that you'd been talking
14 about?

15 **A.** We did not think it applied to those developers.

16 **Q.** And why did Google think that this exception did not apply
17 to those developers?

18 **A.** For the same reason I explained. We did not believe that
19 having an app and a website of the same service was the same as
20 buying a piece of content and using it somewhere else not
21 related to the service.

22 **Q.** All right. I want to talk with you now about why Google
23 took that position, why Google wanted these developers we've
24 been talking about to use Google Play Billing.

25 Were there security considerations there?

1 **A.** Yes, very much so.

2 **Q.** What were those security considerations?

3 **A.** So, I mean, Android as a whole is very -- we are very
4 security conscious. We want to make sure any Android user is
5 protected and any piece of content, any app that's sold through
6 the Play Store, we want to make sure that's safe and secure.

7 And in payments is one thing where, you know, if there's a
8 bad actor, a bad app in the store who uses methods to defraud
9 users in any way, we take that really seriously. And so using
10 our payments platform, we knew it was safe and secure. We
11 could guarantee it.

12 **Q.** And if a user has a negative experience with another
13 billing service they use from an app they acquire from the
14 Play Store, how does that impact the Google Play Store?

15 **A.** I mean, the Play Store is where they got that good; and if
16 they bought an app or they -- sorry -- they downloaded an app
17 and they bought something in that app and they were hurt in
18 some way, whether financially injured, that reflects very
19 poorly on the Play Store because that means we allowed an app
20 that would do that into the Play Store and we sold it
21 effectively, we distributed it to the user, and that's not a --
22 that's not something we ever want to happen.

23 **Q.** Okay. So setting aside security for a moment, which you
24 just talked about, were there other aspects of the overall user
25 experience that led Google to prefer that these developers

1 we've been talking about use Google Play Billing?

2 **A.** Yeah. It's not necessarily just about, you know, stealing
3 from users. There's also just sort of a transparency,
4 consistency, and purchase management aspect to it that we
5 really thought was valuable to users and important for users.

6 **Q.** And in addition to the user experience, did Google also
7 believe there was a fairness issue between large developers and
8 small developers when it came to the application of this
9 exception?

10 **A.** Yeah. I mean, some of the largest developers have lots of
11 money and resources and people and experience to be able to
12 develop their own complex billing systems. And a smaller
13 developer, a start-up, a new developer doesn't have that
14 experience, doesn't have that, the resources, to be able to do
15 that. And so we have this idea, this concept that we cared a
16 lot about, this level playing field. We wanted to give
17 everybody a shot in the same way.

18 **Q.** And, finally, you mentioned, I think previously, that
19 Google Play Billing was how Google collected the service fee.
20 Did I hear that correctly?

21 **A.** Yes.

22 **Q.** And so in reaching its conclusion about whether this
23 exception should apply to these developers, did Google also
24 consider that issue, the issue of the service fee?

25 **A.** Yes.

1 Q. And how so?

2 A. Well, if the small developer who can't develop their own
3 billing system has to pay the service fee and the biggest
4 developers in the space don't have to pay the service fee, that
5 is also disadvantaging the smaller developers.

6 Q. Now, if Google's position was that this exception did not
7 apply and the developers are taking the position that the
8 exception did apply, why didn't Google just kick the developers
9 out of the Play Store?

10 A. I mean, because it's really important as a store to have
11 all the things that people are looking for and that people
12 want. I mean, if you have a -- if you're a toy store owner and
13 there's a toy store down the street that has the hottest toy of
14 the season and you don't have it, you're going to lose
15 customers.

16 And so for us it was really important that we had -- we
17 called it parity. You probably see that in some of these
18 documents. We wanted to be at parity with the Apple App Store
19 and make sure we had all the same apps with the same quality as
20 Apple does.

21 Q. And so rather than just kicking the developers out of the
22 store, did there come a time when Google chose instead to
23 clarify how this exception applied?

24 A. Yes.

25 Q. And were you out of the Play Store business by then?

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1 **A.** I was.

2 **Q.** I'd like to take a look at one of the documents that my
3 colleague showed you during his examination when you were
4 talking with him about the exception. It's Exhibit 704.

5 Now, Ms. Rasanen, I think you testified earlier that this
6 is an e-mail exchange that you participated in about the
7 outside-the-app exceptions issue that we've been discussing for
8 Match apps. Do I remember that correctly?

9 **A.** Yes.

10 **Q.** I'd like to direct your attention to the second page of
11 the document, and I'd like to show you again the e-mail that I
12 believe my colleague showed you that you wrote on January 12th,
13 2017, at 10:06 a.m. Do you see that?

14 **A.** Yes, I do.

15 **Q.** I'd like to direct your attention to the number two in
16 the -- I'd like to direct your attention to the paragraph
17 numbered two in your e-mail. Do you see that?

18 **A.** I do.

19 **Q.** It reads (as read):

20 "The larger, most profitable services like Match,
21 Zoosk, and eHarmony began as web businesses..."

22 Do you see that?

23 **A.** Yes.

24 **Q.** So what are Match, Zoosk, and eHarmony?

25 **A.** These are dating services.

1 Q. And at this time did they have apps in the Google Play
2 Store?

3 A. They did. I'm not sure about eHarmony, but Match and
4 Zoosk, absolutely.

5 Q. Match and Zoosk anyway?

6 A. Yes.

7 Q. The sentence goes on to read (as read):

8 "... and are actually quite sophisticated in terms of
9 churn reduction."

10 Do you see that?

11 A. Yes.

12 Q. Are you familiar with the phrase "churn reduction"?

13 A. I am.

14 Q. What is churn reduction?

15 A. Churn reduction is a term used to describe preventing
16 people from leaving your service. So in the case of a Match,
17 it would be preventing people from unsubscribing from Match's
18 services.

19 Q. All right. I'd like to ask you a few more questions about
20 that, and to do that I'll ask you to turn to another document.
21 I don't think this is in evidence yet. It's Exhibit 5973 in
22 the -- yes, right.

23 Ms. Rasanen, do you recognize Exhibit 5973 as an e-mail
24 chain that you participated in from June of 2018?

25 A. Yes. Yes, I do.

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1 **Q.** And what is the subject matter of this e-mail? What is
2 this talking about?

3 **A.** Sorry. I was going to say the subject says "Sorry" -- "Re
4 Sorry." This is discussing the Match Group and communication
5 with the Match Group.

6 **MR. KRAVIS:** At this time we move trial Exhibit 5973
7 into evidence.

8 **MR. HUESTON:** No objection.

9 **THE COURT:** It is admitted.

10 (Trial Exhibit 5973 received in evidence.)

11 **BY MR. KRAVIS:**

12 **Q.** So, Ms. Rasanen, I want to direct your attention to the
13 third -- the bottom of the third page of e-mail. Do you see at
14 the bottom of the third page there is an e-mail on June 19th,
15 2018, at 11:56 a.m. from Adrian Ong?

16 **A.** Yes.

17 **Q.** Who is Adrian Ong?

18 **A.** Adrian Ong was the overall Match Group's Google contact.
19 So he was sort of the partner manager from Match Group to
20 Google.

21 **Q.** And do you see Mr. Ong writes (as read):

22 "Thank you. I also have an update on some GBP tests
23 we have run."

24 Let me just stop there.

25 Do you have an understanding of what GBP refers to here?

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1 **A.** I think he means GPB, Google Play Billing.

2 **Q.** The sentence continues (as read):

3 "Unfortunately, not very positive. Negative revenue
4 impact due to package mix shift to shorter term packages
5 and significantly lower retention rates on renewal."

6 Do you see that?

7 **A.** Yes.

8 **Q.** What is your understanding of what Mr. Ong was
9 communicating in that sentence?

10 **A.** So Match at this time was running some tests, and what
11 they found is that Google Play Billing, in their view, did not
12 perform as well as their own service did. It was a negative
13 impact on revenue.

14 "Package mix shift" means that essentially consumers who
15 were on the Match service only had the options to buy
16 two-month, four-month and six-month subscriptions; and on
17 Google Play Billing, we offer one-month subscriptions. And so
18 they were seeing a lot of people move from a two-month
19 subscription to a one-month subscription. If I'm remembering
20 correctly, that's what this refers to.

21 **Q.** I want to direct your attention a little bit further up
22 the chain to another e-mail from Mr. Ong. This one starts on
23 the bottom of page 2 and goes to the top of page 3. It's the
24 e-mail on June 19th, 2018, at 1:47 p.m. Do you see that?

25 **A.** Yes.

1 Q. Now I want to direct your attention to the third numbered
2 paragraph in Mr. Ong's e-mail. It's at the top of page 3 of
3 the exhibit. Are you with me?

4 A. Yep.

5 Q. Mr. Ong writes (as read):

6 "On that note, retention I think is the real issue
7 since the customer is having the same experience
8 regardless of payment method. My hypothesis here is that
9 GPB" --

10 And, again, that's Google Play Billing?

11 A. That is Google Play Billing.

12 Q. (as read):

13 "My hypothesis here is that GPB makes it much easier
14 to cancel a subscription, which is positive from a
15 customer experience perspective, but clearly will have
16 negative LTV impact across most, if not all, of our brands
17 if this holds true across the board."

18 Do you see that?

19 A. I do.

20 Q. That's kind of a mouthful. What did you understand
21 Mr. Ong to be saying there?

22 A. Google Play Billing makes it clear and easy for people to
23 manage their subscriptions and cancel them in an easy way and
24 Match Group does not. And so this, again, is going back to a
25 churn reduction. This -- they would keep people on their

1 subscriptions because it was hard to cancel them and so they
2 had people continuously paying.

3 Q. I want to direct your attention to the next e-mail up in
4 the chain, which is on page 2, and it's on June 19th, 2018, at
5 12:23 p.m. from someone named Brandon Barras. Do you see that?

6 A. I do.

7 Q. And who is Mr. Barras?

8 A. Brandon was on my team. He reported to me, and he was the
9 direct partner manager for the Match Group at this time.

10 Q. And Mr. Barras there, the first thing he writes is "Minus
11 Match." Do you see that?

12 A. Yes.

13 Q. Do you have an understanding in this context of what
14 "minus Match" means at the top of Mr. Barras' the e-mail?

15 A. Yes. This is sort of common practice in our internal
16 communications. We will forward an e-mail that a partner
17 wrote, but take them off the thread so that we can discuss the
18 contents without the partner on the e-mail.

19 Q. I want to direct your attention to the third paragraph
20 that starts "Re Number 3." Do you see that?

21 A. Yes.

22 Q. And I think we were just looking at a third numbered
23 paragraph in Mr. Ong's e-mail. Do you remember that?

24 A. Yes.

25 Q. All right. So here Mr. Barras writes (as read):

1 "Re Number 3, this is actually incredibly important
2 to our business to respect user intent. We believe it
3 yields better long-term outcomes for developers as well
4 when they allow their users choice when it comes to their
5 products, even if that is leaving."

6 Do you see that?

7 **A.** Yes.

8 **Q.** What did you understand Mr. Barras to mean when he wrote
9 that sentence in response to number three in Mr. Ong's e-mail?

10 **A.** So this is -- this is Brandon. He was composing a
11 response for our senior leader to send back. She was the
12 person in touch with Mr. Ong. And he was basically saying: We
13 really believe that we want to respect users' intent, and we
14 have seen that it is actually better for developers if they do
15 the same. They will end up having a longer term, a healthier
16 relationship with that consumer if they make it clear for them
17 how to do what they want to do even if that means they're going
18 to leave the service.

19 **Q.** From the Google Play Store's perspective, is it good for
20 users if subscriptions are harder to cancel?

21 **A.** No.

22 **Q.** Why not?

23 **A.** I mean, again, it's about the user's choice; right? You
24 want to make sure that the user is paying for something that
25 they actually want; and if you make it hard for them to cancel

1 and that's how you keep them on the service, it doesn't mean
2 they actually want to put them through too many steps to
3 cancel. They might give up and they'll keep paying you. We
4 don't think that's good for users.

5 **Q.** And are there things that the Google Play Store has done
6 to make it easier for users to cancel in-app subscriptions?

7 **A.** Yeah. There's a -- we've created what's called a
8 subscription center where users can go and see all of the
9 current subscriptions, and they can relatively easily click a
10 couple times and cancel that subscription.

11 We also do things like proactively e-mail a user before
12 their subscription renews so that they understand the payment
13 is coming up and if they want to cancel, they can go to the
14 subscription fairly easily and just cancel the subscription.

15 **Q.** Now, I think my colleague showed you some documents
16 referencing the service fee that applied to some of these apps
17 that sold subscriptions around this time. Do you remember
18 that?

19 **A.** Yes.

20 **Q.** Did Google -- did the Google Play Store have programs in
21 place at this time that lowered the service fee that applied to
22 some of these subscription apps?

23 **A.** We did.

24 **Q.** Have you heard of something called the Living Room
25 Accelerator Program or LRAP?

1 **A.** Yes.

2 **Q.** What is LRAP?

3 **A.** Living Room Accelerator Program is a program that
4 streaming video providers can participate in. We call it
5 Living Room because you watch streaming video in your living
6 room.

7 And so developers who fit this category can participate in
8 the program; and by working with us across multiple surfaces,
9 so integrating their app and making their app available on your
10 Android TV and in your Android car, Android auto, and on the
11 mobile device, we would give them a lower service fee in
12 recognition of participating across multiple services.

13 **Q.** What was the lower service fee that Google -- the Google
14 Play Store charged to developers enrolled in the Living Room
15 Accelerator Program at this time?

16 **A.** I believe it was 10 percent.

17 **Q.** And can you just give us a couple of examples of apps that
18 would have fallen into the Living Room Accelerator Program?

19 **A.** Yeah. Apps like Netflix or Hulu, HBO. These were the
20 kinds of apps that would fit that program.

21 **Q.** And are you familiar with another program with the acronym
22 ADAP?

23 **A.** Yes, ADAP.

24 **Q.** Yeah. I've forgotten what it stands for. Can you tell us
25 what ADAP stands for?

1 **A.** It is the Audio Developer Accelerator Program.

2 **Q.** And what was the Audio Developer Accelerator Program?

3 **A.** Very similar to the Living Room Accelerator Program. It
4 was aimed at audio apps or music services that could stream
5 music. Same concept. We worked with them to participate
6 across multiple platforms to make your app available on Android
7 auto for listening in the car or on TVs, for listening on TVs.
8 Things like that. Same concept.

9 **Q.** Were the ADAP apps also eligible for a lower service fee?

10 **A.** They were.

11 **Q.** And do you recall what that service fee was for ADAP
12 around this time?

13 **A.** The same 10 percent.

14 **Q.** Now, why did Google offer developers programs like LRAP
15 and ADAP?

16 **A.** So for content apps, music and video content apps, their
17 business model is such that they have to pay to license the
18 content that they share with users, that they give to users and
19 make available. They have to pay movie studios, TV studios,
20 and all the music studios for the content that they make
21 available to their users, and it's very expensive.

22 And so it's one of those things where they don't actually
23 make that much money per user given the expense of servicing
24 those users. And so we wanted to find a way to keep them on
25 the Play Store and to keep them using Google Play Billing

1 because, again, we believed in that security and transparency
2 aspect and we wanted to find a way to make sure we had, you
3 know, commensurate business interests. So we were able to do
4 that through these programs.

5 Q. Now, in response to Google's decision to clarify this
6 exception in the payments policy that we've been talking about,
7 did some of these larger subscription developers choose a model
8 called consumption only?

9 A. They did.

10 Q. Are you familiar with the term "consumption only"?

11 A. Yes.

12 Q. I want to talk with you about what exactly that means, and
13 I'd like to use Netflix as an example. Is that okay?

14 A. Sure.

15 Q. Is Netflix, in fact, an app that is consumption only?

16 A. Yes.

17 Q. So in the consumption only model, does Netflix get to put
18 its app in the Play Store?

19 A. Yes.

20 Q. And in the consumption only model, does Netflix sell
21 subscriptions inside the app that's in the Play Store?

22 A. No.

23 Q. Where does Netflix sell subscriptions instead?

24 A. They sell their subscriptions through their website.

25 There may be other surfaces as well, but the web, I think, is

1 the most common one.

2 Q. And so if Netflix is selling the subscriptions on their
3 website, in the consumption only model, can a user who buys the
4 subscription on the website then use it inside the app they've
5 downloaded from the Play Store?

6 A. Yes.

7 Q. And how exactly would they do that?

8 A. So you go to netflix.com on your computer, or even on your
9 phone, you can go to their mobile website too, and you would
10 buy a subscription. So you would create your account. You
11 would choose your subscription plan. You would buy it.

12 So in creating your account, you've now created a login.
13 So you have a user ID and a password that you can then take
14 into the Netflix Android app distributed by Play Store, enter
15 your password; and since you've paid for the service elsewhere,
16 it works.

17 Q. And for an app like Netflix that uses that model, this
18 consumption-only model that you've described, does Netflix pay
19 Google any service fee?

20 A. No.

21 Q. And is that the case even though the Netflix app remains
22 in the Google Play Store?

23 A. Yes.

24 Q. Now I want to talk with you about those switching studies
25 here; but before I do that, just one final topic before we

1 leave this subject.

2 I think you were asked some questions during my
3 colleague's examination about the policies that apply regarding
4 developers communicating lower prices to users. Do you
5 remember those questions?

6 **A.** I do, yes.

7 **Q.** Does the Google Play Store have policies about those
8 communications?

9 **A.** I believe they do now. I don't know what they were when I
10 was there.

11 **Q.** Yeah, that was going to be my next question.

12 Are you familiar with those policies? Was that your area
13 or is that somebody else?

14 **A.** That was after me. That was not during my time.

15 **Q.** All right. Let's talk about the switching studies.

16 What does switching refer to here?

17 **A.** So switching is when any user on one mobile platform,
18 mobile operating system, moves to another mobile operating
19 system. So if you are on an iPhone and you switch to an
20 Android, that's called -- you choose Android for your next
21 phone, that's a switcher.

22 **Q.** Now, let me just start with a big-picture question here.

23 My colleague showed you a couple of pretty lengthy slide
24 decks and this really big spreadsheet. Why does Google do
25 this? Why does Google do these studies about switching as

1 you've described it?

2 **A.** I mean, we really want to understand the state of Android
3 and how popular Android is or is not because our business is
4 built on top of Android, and so we need to understand how our
5 business is doing compared to our competition.

6 **Q.** I want to ask you about a couple of the studies that you
7 testified about a moment ago.

8 Could you turn, please, to Exhibit 1766?

9 **A.** The other binder?

10 **Q.** It's actually in both, I think.

11 **A.** Great.

12 **Q.** And this is in evidence, so we can publish it. Thank you.

13 **A.** Got it.

14 **Q.** And, Ms. Rasanen, is this the Android consideration study
15 that you were asked about a moment ago?

16 **A.** Yeah, that's right.

17 **Q.** All right. I'd like to direct your attention to page 8 of
18 the exhibit, please. And I believe this slide is labeled "Key
19 Takeaways." Do you see that?

20 **A.** Yes.

21 **Q.** And do you see in the -- there are three columns there?

22 **A.** Yep.

23 **Q.** And the middle one is labeled "Switchers"?

24 **A.** Yes.

25 **Q.** So my colleague asked you about the second paragraph here.

1 I want to ask you about all of them.

2 Can you read the first paragraph for us, please?

3 **A.** Yes. The first paragraph says (as read):

4 "Roughly one-fifth of IOS (22 percent) and Android
5 (17 percent) users are considering the other OS,"
6 operating system.

7 **Q.** What does "OS" refer to here?

8 **A.** Operating system. Sorry.

9 **Q.** And so what is your understanding what it means when it
10 says roughly one fifth of IOS and Android users are considering
11 the other OS?

12 **A.** So consideration is one of the shopping phases that we
13 examine; and consideration means if somebody ask you would you
14 consider any of these different devices, you say, "Yes, I would
15 consider that." So this means they would consider it; they
16 wouldn't rule it out.

17 **Q.** Now, my colleague asked you about the second paragraph.
18 Let me direct your attention to the third paragraph.

19 Can you read that one for us, please?

20 **A.** Yes. (as read):

21 "OS switching behavior is limited, yet the rate of
22 switching OS is two times higher for switchers to IOS
23 (12 percent) than switchers to Android (6 percent)."

24 **Q.** And what is your understanding of what that paragraph
25 means?

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1 **A.** Two times as many people leave Android and go to IOS as
2 the reverse.

3 **Q.** Now, these documents refer to these things in percentage
4 terms; but just to get some absolute numbers out here, how many
5 Android phones are there in the world today?

6 **A.** Over 3 billion.

7 **Q.** And how many iPhones are there in the world today?

8 **A.** Around a billion, give or take, I think.

9 **Q.** So in that context, 3.5 billion Android phones in the
10 world, do studies that show switching numbers like 12 percent,
11 even 6 percent, is that a concern to Google?

12 **A.** Yeah.

13 **Q.** Why?

14 **A.** Those are huge numbers of people. Six may seem like a
15 small number, but 6 percent of 3 billion is -- help me do the
16 math -- 180 million; is that right? It's a lot. It's big
17 numbers.

18 **Q.** I'm not going to do the math for you.

19 **A.** Okay.

20 **Q.** Let me turn to -- briefly to the other study you were
21 shown, Exhibit 1768, please. This has also, I believe, been
22 admitted into evidence.

23 **A.** Yes.

24 **Q.** And this is the Android brand health study you were asked
25 about?

1 **A.** Mm-hmm.

2 **Q.** Is that a yes?

3 **A.** Yes.

4 **Q.** Okay. Now, I think my colleague asked you some questions
5 about not seeing references to app stores on some of these
6 slides. Do you remember that?

7 **A.** I do.

8 **Q.** Let me ask you to turn to page 8 of this document.

9 Let me ask you first about the sentence here, and then
10 I'll take you to another page.

11 I'm sorry. I have you on the wrong page. Could you look
12 at page 16 for me, please?

13 **A.** Sure.

14 **Q.** Now, Ms. Rasanen, can you just read for us the -- what it
15 says at the top there under "Security"?

16 **A.** It says (as read):

17 "Security.

18 "But a concerning trend for security: As more IOS
19 owners say their phone is secure, fewer Android owners say
20 the same (quarterly delta increased from minus four
21 percentage points to minus 10 percentage points). And
22 perceived lack of app security continues to rise among
23 those who say Android isn't secure."

24 **Q.** And do you see that there's like a white box there on the
25 left-hand side that says "Which phones are secure?" Do you see

1 that?

2 A. Yes.

3 Q. What are the numbers that are reflected in that box?

4 A. So this is, if I'm reading this correctly, looking at how
5 user -- how iPhone owners and Android owners think about the
6 security of their phone.

7 Q. And just looking at the numbers that are pulled out here,
8 if you look at the top rows, which numbers are higher on this
9 measure of security?

10 A. iPhone owners think their phones are more secure than
11 Android.

12 Q. Now I'm going to turn you to the next page, Slide 17.
13 This is the one I was thinking of.

14 Do you see a reference to the app stores on this slide?

15 A. Yes. It says "Safety & App Stores."

16 Q. Can you read for us, please, the text that appears under
17 that heading?

18 A. It says (as read):

19 "The trend continues to play out in owner's
20 perceptions of their own app store's safety. That said,
21 75 percent of Android owners say Google Play is a safe
22 place to get apps even while less than half are aware of
23 Google Play Protect."

24 Q. And do you see another white box on the left-hand side?

25 A. Yes.

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1 Q. It reads (as read):

2 "Which store is a safe place to get apps?"

3 Do you see that?

4 A. Yes.

5 Q. Could we blow that up, please?

6 What is it that's being measured here?

7 A. Again, similar to how these iPhone and Android users
8 feel about the security of their phone, this one is
9 demonstrating how they perceive the security of their app
10 store.

11 Q. Last one. I'm going to ask you to dive back into that
12 spreadsheet you were shown. It's been entered into evidence as
13 1764.

14 Do you have it up in front of you?

15 A. Yes, here it is.

16 Q. You can also look at it on the screen.

17 A. Oh, thanks.

18 Q. It may be helpful to look at both.

19 A. Small type either way. Got it.

20 Q. All right. I just have a few questions for you on this
21 document. I'm going to ask you to identify a couple of the
22 rows and then take you to the columns. Okay?

23 A. Sure.

24 Q. All right. Now, I think my colleague asked you about
25 row 41. That's grand total; right?

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1 A. Yes.

2 Q. And do you see -- what is row 38?

3 A. 38 are the same metrics for the U.S.

4 Q. And "U.S." here refers to United States?

5 A. Yeah, United States. Sorry.

6 Q. Okay. So with those in mind, 38 and 41, I want to take
7 you to columns Y and Z.

8 A. Yes.

9 Q. And can you remind us what we are looking at in columns Y
10 and Z?

11 A. So this is the column showing how many people -- this is
12 switching probability. So this is how many people are likely
13 to switch from Android to Android and Android to IOS.

14 Q. And is it the column Z that is showing the Android to IOS?

15 A. Yes, that's right.

16 Q. The switching?

17 A. That's right.

18 Q. So let me start with the 41, the grand total.

19 I think you testified that on this sheet the number of
20 reported Android to IOS switchers is 6.93 percent. Do I have
21 that right?

22 A. Yes.

23 Q. And, again, that is in the context of 3.5 billion Android
24 phones in the world?

25 A. Yes.

RASANEN - REDIRECT / HUESTON

1 **Q.** Now let me -- now let me show you finally the row that was
2 the U.S. row. I think you said that one is row 38; right?

3 **A.** Yes.

4 **Q.** What is the switching number Android to IOS for phones in
5 the United States?

6 **A.** Almost 14 percent.

7 **Q.** Thank you, Ms. Rasanen.

8 **MR. KRAVIS:** I have no further questions.

9 **THE COURT:** Okay. Any brief recross?

10 **MR. HUESTON:** Yes, Your Honor.

11 **REDIRECT EXAMINATION**

12 **BY MR. HUESTON:**

13 **Q.** Ms. Rasanen, I want to pick up where counsel left off
14 there.

15 Let's talk about the math that's been put up. There were
16 numbers like 12 percent and 6 percent that you just reviewed;
17 right?

18 **A.** Yep.

19 **Q.** Now, the math -- and, look, I'm not a math major and this
20 gets -- and neither are you, but let's try to focus with what's
21 clear here.

22 The right number is not looking at 6 percent of 3-point --
23 3 billion users; correct?

24 **A.** The -- well, the right number? Which right number? What
25 do you mean?

1 Q. Well, let's explore.

2 That 3-billion number is all the people we estimate who
3 owned phones at that time; right?

4 A. Yes, that's correct.

5 Q. Okay. And you'll agree with me that only a fraction of
6 that number, of all Android users, buy a new phone at a given
7 time?

8 A. I think we established every three years.

9 Q. Yeah.

10 A. One out of every three years. That would be about a
11 billion every year --

12 Q. Yeah.

13 A. -- give or take.

14 Q. So, you know, you can't say 6 percent of 3 billion because
15 3 billion people are not every day going "I need to buy a new
16 phone"; right?

17 A. That's right.

18 Q. So it's a much smaller number that we're talking about
19 here.

20 You'd agree that the percentage -- that Android does not
21 lose 6 percent of its users a year based on 3 billion. It's a
22 much smaller number based on the much smaller group of folks
23 who are actually looking to buy a new phone on a
24 once-in-every-three-year basis; right?

25 A. So every three years --

RASANEN - REDIRECT / HUESTON

1 Q. Right.

2 A. -- Android loses 6 percent. Every one year they lose
3 6 percent of a billion, which is still a pretty big number.

4 Q. Okay. And that's if that math holds, but that's a lot
5 smaller of a number; right? Because we're talking about people
6 who are considering buying a new phone, and it's once every
7 three years; right? It's not every user.

8 A. Sure. But that happens every year, right.

9 Q. And let's talk about whether you're losing more or Apple
10 is losing more.

11 It's not a one-way street; right? Users also switch from
12 Apple to Android. That's the other part of the math that's
13 missing there; correct?

14 A. Yes, some do.

15 Q. Yeah. In fact, more than some. One of the studies we
16 looked at showed that more people intended to switch from Apple
17 to Android than the other way around; right?

18 A. Again, that's intent, yes. That doesn't mean they did.

19 Q. Well, let's, again, look at what the study said.

20 Exhibit 1766 already admitted at Slide 8.

21 A. 1766?

22 Q. I'm going to put it up on the screen.

23 A. Oh, great.

24 Q. And this shows here 9 percent of IOS likely purchasers
25 intend to switch to an Android while 7 percent of Android

1 likely purchasers intend to switch to an IOS device; right?

2 **A.** That's how many intend to. The next paragraph shows how
3 many did.

4 **Q.** Right. So that means 7 percent intend to switch away
5 Android but 9 percent are switching towards an Android
6 according to this, by intent; right?

7 **A.** By intent.

8 **Q.** Yeah. So the math is going your way here on this one;
9 right?

10 **A.** Except that the total raw numbers are actually not equal;
11 right?

12 **Q.** Well --

13 **A.** 7 percent of, let's call it, a billion is more people than
14 9 percent of Apple's one-third, which would be what?
15 300 million. So it is not more people. It is a percentage of
16 a different piece.

17 **Q.** Sure. But this set of percentages showing you're winning
18 the percentage game at least in this snapshot; right?

19 **A.** In intent, not in actual purchase.

20 **Q.** In intent.

21 And over time to see what had happened, we've seen Android
22 become the dominant operating system; right? 85 percent of all
23 smartphones today globally are Android devices; right?

24 **A.** I don't know if it's 85 percent today. The study you
25 showed me was from -- or the board of directors note was from

1 2020.

2 Q. Right.

3 A. So that's sometime ago; and if we have this high switching
4 taking place, it wouldn't be 85 percent today.

5 Q. Well, counsel didn't show you a different number. We've
6 just seen the 85 percent; right?

7 A. That's right.

8 Q. Okay. Now let's talk about app security.

9 Google's lawyer showed you some slides that claim that
10 smartphone users care about app security; right?

11 A. Yes.

12 Q. And, in fact, as we covered, there are many other factors
13 that influence a consumer's choice of smartphone; right?

14 A. There are other factors, yes.

15 Q. Now, one slide that counsel did not show you in
16 Exhibit 1768 is Slide 13, which puts all this in perspective.

17 Let's go to that. Put it up on the screen, please.

18 THE CLERK: I'm sorry, what exhibit?

19 MR. HUESTON: Sure. It's Exhibit 1768 at Slide 13 --
20 at 13. There it is.

21 BY MR. HUESTON:

22 Q. And this states that, quote (as read):

23 "Compatibility" --

24 First of all, the title here is "Likelihood to use
25 Android." Do you see that?

RASANEN - REDIRECT / HUESTON

1 **A.** Yes, I do.

2 **Q.** And it states that (as read):

3 "Compatibility, enjoyment, ease of use, high quality,
4 and fast are most likely to influence the use of Android
5 devices."

6 Right?

7 **A.** Yes.

8 **Q.** And then it kind of ranks them from left to right; right?

9 In terms of, like, the bigger reasons with fewer percentages
10 down to the right with the less important reasons; right? Do
11 you see that?

12 **A.** Yes.

13 **Q.** Okay. Now, if you look at the list, if we start on the
14 left-hand side, I've tried to do this, I have to count -- if
15 you look at each description there, compatible with devices I
16 own, enjoyable to use, easy to use, you can keep going and
17 counting all the way to the right.

18 And see if you agree with me that you have to go all the
19 way down to the 14th down on the right before you see anything
20 resembling security. "Trustworthy," do you see that?

21 **A.** I see "Trustworthy."

22 **Q.** That's 14th of the reasons there; right?

23 **A.** Do you want me to count?

24 **Q.** One, two, three, four, five, six, seven, eight, nine...

25 **A.** Yes, 14.

RASANEN - REDIRECT / HUESTON

1 Q. Okay. The 14th reason.

2 And, by the way, there's nothing here -- in looking at all
3 those reasons, there's nothing on here at all about the app
4 store being better or worse as a reason; right?

5 A. I don't see that, no.

6 Q. Right. And just quickly, next slide, also not shown to
7 you, we see the drivers of likelihood to use Apple IOS; right?

8 A. Yes.

9 Q. And, again, those drivers are, to quote the slide here,
10 similar to the ones we just saw from Android; right?

11 A. Yes.

12 Q. And you see the same top five right there: Compatibility,
13 enjoyment, ease of use, helpful, and fast; right?

14 A. You see trustworthy is a little further up the list.

15 Q. That's right. And nothing at all about the app store or
16 app quality, right, listed there?

17 A. I don't think so. That's right.

18 Q. Thank you.

19 Let me ask you about -- you were talking about LRAP and
20 ADAP; right?

21 A. Yes.

22 Q. And you said that these -- in your testimony, I believe
23 you said that these were designed to help some developers with
24 their margins; right? If they were maybe struggling with
25 profitability; right?

RASANEN - REDIRECT / HUESTON

1 **A.** Yes.

2 **Q.** But that's not the real reason for, in fact, coming up
3 with LRAP and ADAP, was it?

4 **A.** I don't -- what do you mean?

5 **Q.** Well, you remember that the real reason for coming up with
6 LRAP and ADAP was to quiet down the agitation of those
7 developers that were spreading the word that this was not good
8 for them? Do you remember that?

9 **A.** I don't remember that.

10 **Q.** Okay. Let's go to Exhibit 1438.

11 You'll recognize this as an e-mail that you're sending at
12 the top.

13 **MR. HUESTON:** And we move this into evidence at this
14 time.

15 **THE WITNESS:** Okay.

16 **THE COURT:** Is there any objection?

17 **MR. KRAVIS:** No objection.

18 **THE COURT:** All right. It is admitted.

19 (Trial Exhibit 1438 received in evidence.)

20 **BY MR. HUESTON:**

21 **Q.** And I want to quickly go to page 1 and highlight the
22 following language. He asks there -- if we can pull it out --
23 "Is it signing up to LRAP, ADAP, or the MDF in the form of
24 contracts?" Do you see that?

25 **A.** I do.

RASANEN - REDIRECT / HUESTON

1 Q. And, in fact, what it says here right before that (as
2 read):

3 "I'm not clear on what form a partner's agreement not
4 to agitate needs to take to get us comfortable with a
5 policy announcement on the proposed time frame. Is it
6 signing up to the LRAP, ADAP, or the MDF?"

7 Those were the three alternatives for contracts to deal
8 with the cited issue of agitation, right, in these words with
9 Mr. Rosenberg in an e-mail with you? Right?

10 A. They were contemplated agreements that we could enter into
11 with these developers.

12 Q. Right.

13 A. That is true. You mentioned --

14 Q. To deal with agitation; correct?

15 A. Sorry. To deal with developers complaining, that's right.
16 But you asked me if LRAP and ADAP were created for this reason,
17 and that's not accurate.

18 Q. Well, except in this document --

19 A. These were existing programs. Sorry. I just wanted to be
20 really clear.

21 Q. Sure. And I want to be clear too.

22 The document says (as read):

23 "I'm not clear on what form a partner's agreement not
24 to agitate needs to take. Is it signing up to LRAP, ADAP,
25 and MDF?"

RASANEN - REDIRECT / HUESTON

1 That's how it's posed here; right?

2 **A.** That's what he asks, yes.

3 **Q.** Three alternatives, yes, to come up with a way by contract
4 to keep the complainers from no longer agitating; right?

5 That's one of the reasons?

6 **A.** He's asking the question if it's feasible to help these
7 developers by entering into one of these particular agreements.

8 **Q.** I'm sorry. So helping them not to agitate; is that your
9 testimony?

10 **A.** Well, they're complaining because they're upset, and so we
11 want to help them so that they're not upset anymore and that
12 they aren't going to complain about us.

13 **Q.** I see.

14 **A.** It's bad for business if developers are complaining about
15 you. We don't -- we don't -- we want to make them happy. You
16 just established earlier that I'm supposed to be in their
17 corner representing their interests, and so that's -- these are
18 some of the ways that we thought about potentially working with
19 these developers.

20 **Q.** Okay. And after hearing all those complaints that we went
21 through and I built a demonstrative with -- remember that?

22 **A.** I do.

23 **Q.** -- you and Google decided to help them by eliminating the
24 exception and forcing all of them to exclusively use
25 Google Play Billing? That's what happened after all those

RASANEN - REDIRECT / HUESTON

1 complaints; right?

2 **A.** I wasn't there. That is where we are today.

3 **Q.** That is where you are today?

4 **A.** I don't know what happened in between when I left and when
5 the policy changed.

6 **Q.** That's where you are today; right? You know that?

7 **A.** That's my understanding.

8 **Q.** Okay. Now I want to talk about this retention issue you
9 brought up on Exhibit 5973.

10 Let's pull that up.

11 And you focused here on an e-mail from Mr. Ong and in
12 particular this reason number three area; right? This number
13 three area.

14 Let's go to it.

15 Number three, that's what counsel asked you about; right?

16 **A.** Yes.

17 **Q.** On that note retention I think is the real issue.

18 I want to actually show you and the jury the rest of the
19 e-mail to get the right context here.

20 In Mr. Ong's e-mail, he actually identifies several issues
21 with Google Play Billing's performance; right?

22 **A.** He does.

23 **Q.** Let's look at number two, which counsel didn't bother
24 showing you. He writes that (as read):

25 "They were forced to use a 1/3/6 product mix to set

1 up an even test since I've heard that apparently Google
2 will now not be supporting the 2/4/8 month mix, which we
3 find optimizes conversion for POF."

4 Right?

5 **A.** Yes.

6 **Q.** Yeah. There were some acronyms there. But to break it
7 down quickly, he's referencing product mix, and you know that's
8 referring to options for the length of subscriptions; right?

9 **A.** I do.

10 **Q.** And that they usually offer two-, four-, and eight-month
11 long subscriptions, which they find optimizes conversion,
12 right, for Plenty of Fish? That's POF?

13 **A.** Yes.

14 **Q.** But they were forced to change to 1/3/6 months because
15 Google didn't support 2/4/8; right? That's what he was
16 pointing out?

17 **A.** During their test, yes, we did not have those options
18 available so they had to test with what we have.

19 **Q.** Sure. And then as a result of switching to that 1/3/6
20 month package, Match saw, quote, "more users shift into
21 one-month packages which results in lower LTV for them"; right?

22 **A.** For Match, yes.

23 **Q.** Yeah. And LTV is lifetime value; right?

24 **A.** That's right.

25 **Q.** So it was causing a reduction in the lifetime value this

RASANEN - REDIRECT / HUESTON

1 change; right? That was one of the complaints he was raising
2 here in the e-mail; right?

3 **A.** Yes, because users could choose a lower cost alternative.

4 **Q.** Well, and then let's go to four.

5 That wasn't all he complained about. He also writes in
6 number four (as read):

7 "We then compute a 30 percent rev share on top of
8 these numbers, and we're looking at a world of pain."

9 That's the words; right?

10 **A.** Those are the words he used.

11 **Q.** No small issue. A world of pain; right, ma'am?

12 **A.** In his view.

13 **Q.** Okay. And you didn't discuss any of those problems Match
14 had with Google Play Billing in the review of your e-mail with
15 Google's counsel; right?

16 **A.** I did not.

17 **Q.** Let's talk about the one thing you did talk about, this
18 retention issue.

19 He did write that retention is significantly worse; right?

20 **A.** Yeah. Is that -- I'm sorry. That's what he said.

21 **Q.** That's what three is.

22 **A.** Yeah. I think he said --

23 **Q.** And you -- I think you testified that you interpreted that
24 to mean that Mr. Ong didn't like making it easy for people to
25 cancel their subscriptions, words to that effect; right?

RASANEN - REDIRECT / HUESTON

1 A. Yeah. If we could look at the text again, that's
2 basically what he says.

3 Q. Yeah. Pop it on the next page.

4 And there it is. That's the paragraph you were talking
5 about; right?

6 A. Yeah, that's right.

7 Q. But to be clear, Mr. Ong was just sharing the,
8 quote/unquote, "hypothesis" for why retention was worse on
9 Google Play Billing; right?

10 A. Yes. He used the word "hypothesis."

11 Q. Yeah. And a hypothesis, that's just an unproven theory;
12 right? That's what a hypothesis is --

13 A. Okay.

14 Q. -- right?

15 And so you don't actually know the reason why retention
16 was an issue on Google Play Billing, do you?

17 A. He said, "I think the real issue is retention and that
18 would prevent them from using Google Play Billing."

19 Q. A hypothesis among other issues outlined here; right?

20 A. Yes.

21 Q. Okay. And you're also aware that there are other factors
22 that affect retention; right?

23 A. Yes.

24 Q. Okay. Let's go to 8033. It should be in your binder. An
25 e-mail that you sent.

RASANEN - REDIRECT / HUESTON

1 **A.** Sorry. I'm trying to get there. Eight...

2 **Q.** 8033.

3 **A.** I'm sorry. Is it in this one (indicating)?

4 **Q.** That's because we don't have the right binder in front of
5 you.

6 **MR. HUESTON:** If we can, Your Honor, we'll pass up the
7 binder.

8 **THE COURT:** That's fine.

9 **MR. HUESTON:** My apologies.

10 **THE WITNESS:** I'm getting a little tired.

11 **BY MR. HUESTON:**

12 **Q.** Sorry to pile them on.

13 **A.** It's okay.

14 You want this one back? Okay.

15 Okay. Now, where are we going? 8033?

16 **Q.** Right. And if you can just tell me you recognize this is
17 an e-mail that you sent.

18 **A.** 8033, this is the --

19 **Q.** Yep.

20 **A.** -- mobile app speedy activity update? Am I on the right
21 one?

22 **Q.** It should be an e-mail from you on February 20th, 2018.

23 **A.** Yeah.

24 **MR. HUESTON:** Okay. We move that into evidence at
25 this time.

RASANEN - REDIRECT / HUESTON

1 **MR. KRAVIS:** No objection.

2 **THE COURT:** Admitted.

3 (Trial Exhibit 8033 received in evidence.)

4 **BY MR. HUESTON:**

5 **Q.** Let's put that up, and if we flip to page 2.

6 This is activity report January 29th to February 16th;
7 right? It's a summary of what's happening that week; right?

8 **A.** Yes.

9 **Q.** Okay. Let's go to page 2 and entry for "Watcha Play."

10 And, Ms. Rasanen, you know Watcha Play is like the Netflix of
11 Korea; right?

12 **A.** I don't recall Watcha Play, but I'll take your word for
13 it.

14 **Q.** Okay. And the entry here says that there was a
15 Watcha Play subscription retention study meeting; right?

16 **A.** Yeah.

17 **Q.** And it says (as read):

18 "Watcha Play has implemented 100 percent Google Play
19 Billing since July 2017 and shared its insight on
20 potential reasons why retention might be lagging in
21 Google Play Billing versus other FOPs."
22 Right?

23 **A.** Yes.

24 **Q.** So Watcha Play experienced lower retention when using
25 Google Play Billing; right?

RASANEN - REDIRECT / HUESTON

1 A. Is that what it says? Yeah.

2 Q. Yes?

3 A. Potential reasons why retention might be lagging, uh-huh.

4 Q. Right. And potential, that's hypothesis. They're trying
5 to figure it out; right.

6 A. Yeah.

7 Q. Okay. And one is -- they list them here. One is
8 involuntary churn on DCB higher price due to Google Play
9 Billing; right?

10 A. Yes.

11 Q. And "DCB" means direct carrier billing; right?

12 A. It does.

13 Q. And that's a form of payment that Google Play Billing
14 accepts; right?

15 A. It is.

16 Q. And another potential culprit listed is higher price due
17 to Google Play Billing implementation; right?

18 A. Yes.

19 Q. And which refers to the fact that Watcha Play had to
20 charge a higher price when they implemented 100 percent
21 Google Play; right?

22 A. They chose to do that, yes.

23 Q. And, by the way, Google Play Billing making it easier to
24 cancel, you don't see words to that effect here as one of the
25 hypotheses; right?

RASANEN - REDIRECT / HUESTON

1 **A.** I do not.

2 **Q.** Okay. We can take that down.

3 Now, counsel also talked to you about, you know, Apple as
4 being the main reason for much of this; but isn't it true,
5 Ms. Rasanen, that Google was worried primarily about other
6 Android developers distributing apps, not Apple?

7 **A.** Sorry. Can you --

8 **Q.** Sure.

9 Isn't it true that what Google was really worried and
10 focused on was other Android developers distributing apps;
11 right? That was the focus?

12 **MR. KRAVIS:** Objection. Beyond the scope.

13 **THE COURT:** Overruled.

14 Go ahead.

15 **THE WITNESS:** I wouldn't say Google was really worried
16 about that and not about Apple, no.

17 **BY MR. HUESTON:**

18 **Q.** Okay. Let's go back to Exhibit 8573 admitted for certain
19 slides.

20 I'm only going to go to Slide 35 here, and this is a
21 Google Play deck. Let's go -- it's the onboarding deck for all
22 new employees, and this slide is titled "What we worry about";
23 right? Do you see it?

24 **A.** I do.

25 **Q.** And take a look at this closely, nowhere on this slide

RASANEN - RECROSS / KRAVIS

1 does it say "Apple"; right?

2 **A.** That's right.

3 **Q.** In fact, under "app distribution," there are three logos
4 and none of them is Apple; right?

5 **A.** That's right.

6 **Q.** And Facebook, Amazon, WeChat, they're all available on
7 Android; correct?

8 **A.** Yeah. Is that middle one Amazon? I think that's one
9 store.

10 **Q.** Okay. All available on Android; right?

11 **A.** Yes.

12 **MR. HUESTON:** Pass the witness.

13 **THE COURT:** Very briefly, please.

14 **RECROSS-EXAMINATION**

15 **BY MR. KRAVIS:**

16 **Q.** Ms. Rasanen, I have just one question for you about the
17 slide you were just shown.

18 **A.** Okay.

19 **Q.** It's 8573, Slide 35.

20 **A.** Okay. Can we see it again? Sorry. I don't have it in
21 front of me.

22 **Q.** Is it possible using their system to get this up for her
23 because it's really small and we can only see a part of it?

24 Can we do that.

25 8573, Slide 35. Do you see on the left-hand side it says

1 "Games"?

2 **A.** Yes.

3 **Q.** Do you see there's a little, like -- there's a cell phone
4 there?

5 **A.** Yes.

6 **Q.** Can you see what's being depicted on that phone?

7 **A.** That's an Apple.

8 **Q.** It's a what?

9 **A.** That's an Apple logo on that phone.

10 **Q.** Thank you.

11 **THE COURT:** Okay. We'll take our lunch and come back
12 about 10 to 1:00.

13 **THE CLERK:** All rise.

14 (Proceedings were heard out of the presence of the jury:)

15 **THE COURT:** Okay. The witness is discharged.

16 (Witness excused.)

17 **THE COURT:** See you in a bit.

18 (Luncheon recess was taken at 12:20 p.m.)

19 **AFTERNOON SESSION**

1:00 p.m.

20 **THE CLERK:** We're back on the record.

21 **THE COURT:** Who's next?

22 **MR. EVEN:** Your Honor, Epic calls Dave Kleidermacher.

23 **THE CLERK:** Please stand and raise your right hand.

24 \\\

25 \\\

KLEIDERMACHER - DIRECT / EVEN

DAVID NOAH KLEIDERMACHER,

called as a witness for the Plaintiff, having been duly sworn,
testified as follows:

THE WITNESS: I do.

THE CLERK: Thank you. Please be seated.

Please state your full name for Court and spell your last
name.

THE WITNESS: My name is David Noah Kleidermacher. My
last name is spelled K-L-E-I-D-E-R-M-A-C-H-E-R.

THE CLERK: Thank you.

THE COURT: Okay. Go ahead.

DIRECT EXAMINATION

BY MR. EVEN:

Q. Good afternoon, Mr. Kleidermacher.

A. Good afternoon.

Q. My name is Yonatan Even. I represent Epic.

You have a binder there. Do you see it?

A. Yes.

Q. So we'll be using it throughout, so I appreciate if you
keep that at hand.

You joined Google in 2017; correct?

A. Yes.

Q. And you're Google's vice president of engineering;
correct?

A. Yes.

1 Q. And as Google's vice president of engineering, it is your
2 responsibility to ensure security on Android devices; correct?

3 A. Yes.

4 Q. Now, I want to talk to you a little bit about malware.
5 Okay?

6 Malware is software that is doing something maliciously
7 with intent to harm in some way; correct?

8 A. Yes.

9 Q. And malware can get onto an Android device from a variety
10 of sources; correct?

11 A. Yes.

12 Q. One way, for instance, that malware can get onto a device
13 is from the Google Play Store; correct?

14 A. Correct.

15 Q. Now, obviously it can get onto the device from other
16 stores and other aspects; correct?

17 A. Correct.

18 Q. Now, when it comes to app stores, fighting malicious apps
19 is much like a game of Whack-A-Mole; correct?

20 A. It can be referred to that way I suppose.

21 Q. In fact, you did refer to it that way in the past;
22 correct?

23 A. I may have, yes.

24 Q. And you play this game of Whack-A-Mole, when you play it,
25 the larger the catalog of apps in the app store, the more

KLEIDERMACHER - DIRECT / EVEN

1 difficult the challenge is to keep malware out of that app
2 store; correct?

3 **A.** I think that's generally true.

4 **Q.** Sir, it is correct, isn't it, that the larger the catalog,
5 the more difficult the challenge is; correct?

6 **A.** I think it's generally true, yes.

7 **Q.** Sir, it's not just generally true. It is true; right?
8 The larger the catalog --

9 **A.** Well, I say generally because you can have a store that
10 would be larger but not as safe -- but safer than a smaller
11 store if they weren't doing as good a job.

12 **MR. EVEN:** Sir, Your Honor, if I can turn to the
13 deposition at page 175 at lines 11 to 19.

14 **THE COURT:** 175?

15 **MR. EVEN:** Correct. At 11 to 19.

16 (Pause in proceedings.)

17 **THE COURT:** Okay.

18 **MR. EVEN:** Can you pull that up?

19 **BY MR. EVEN:**

20 **Q.** Sir, you were deposed in this case; correct?

21 **A.** Yes.

22 **Q.** And you gave testimony under oath?

23 **A.** Yes.

24 **Q.** And so were you asked and did you answer the following?

25 (as read):

1 **"QUESTION:** And part of that is a numbers game; correct?

2 There is just too many apps for you to whack them, all the
3 moles, and make sure that they don't get their heads back
4 up?

5 **"ANSWER:** Yeah, certainly -- yes, it is true that the
6 larger the catalog, the more difficult the challenge is."

7 Did you get this question and answer this response under
8 oath?

9 **A.** Yes.

10 **Q.** Now, the Google Play Store has millions of apps; correct?

11 **A.** Did you say a million?

12 **Q.** Millions.

13 **A.** Millions, yes.

14 **Q.** And tens of thousands of apps are submitted to the Google
15 Play Store each day for review and distribution; correct?

16 **A.** That's correct.

17 **Q.** And that makes the game of Whack-A-Mole for the Google
18 Play Store very challenging; correct?

19 **A.** We have many challenges, yes.

20 **Q.** Now, you believe that certainly for a store the size of
21 the Google Play Store, malware is not a problem that will ever
22 go away; correct?

23 **A.** Correct.

24 **Q.** One of the ways to reduce malware in an app store is to
25 offer a more curated app store with a smaller number of apps;

1 correct?

2 **A.** That can reduce risk.

3 **Q.** And you proposed that Google create a curated app store
4 experience through something named Project Cake; correct?

5 **A.** I have made proposals of that sort in the past, yes.

6 **Q.** And one of those proposals was dubbed Project Cake;
7 correct?

8 **A.** It was more of a conceptual idea; but, yes, you can call
9 it a proposal.

10 **Q.** And under Project -- your Project Cake proposal, the
11 Google Play Store would be bifurcated or divided into two
12 separate user experiences; correct?

13 **A.** Correct.

14 **Q.** And one of the experiences within the Google Play Store
15 would contain a set of apps that are curated; right?

16 **A.** They would be more curated.

17 **Q.** More curated.

18 Okay. And in this curated portion of the Google Play
19 Store, the apps would be thoroughly vetted such that they will
20 pose no or very little risk; correct?

21 **A.** That was the idea, yes.

22 **Q.** And the curated portion of the Google Play Store that you
23 had in mind would include fewer than 50,000 of the most popular
24 apps on Android; correct?

25 **A.** That was the general idea.

1 Q. And that is somewhere between 1 and 2 percent of the
2 overall apps on the store; correct?

3 A. Yes. The concept didn't -- wasn't so important exactly
4 the number; but, yes, generally true.

5 Q. And those apps you believed could represent as much of
6 90 percent of the downloads from the store; correct?

7 A. The concept of Cake had a variety of versions where the
8 percentages might change, and it might be 90 percent, it might
9 be 60 percent, 50 percent, et cetera.

10 Q. Okay. Then you'd have a separate experience that would be
11 offered within the Google Play Store that hosts sort of the
12 long tail of less popular apps, and that would be less vetted
13 and less curated; correct?

14 A. That is generally correct. Popularity wouldn't
15 necessarily be the top but, yes.

16 Q. Sir, just a yes or no. I don't need the commentary. Your
17 counsel, I'm sure, will give any further color that's needed.

18 And the less curated portion of the Google Play Store apps
19 would be less thoroughly vetted and then users would be told
20 that they are proceeding at a higher risk; right?

21 A. Not necessarily less thoroughly vetted.

22 Q. Sir, we've already established, I think, that you said
23 that in the more curated part they would be more thoroughly
24 vetted; correct?

25 A. It's not clear what level of vetting. I don't think the

1 proposal was that clear.

2 Q. About the level of vetting.

3 In the more curated part, there would be more vetting;
4 correct?

5 A. Can you explain what you mean by "vetting"?

6 Q. Sir, there would be more vetting; correct?

7 A. I'm not sure that is consistent with my proposal.

8 Q. Sir, you remember I just asked you and you just answered
9 that the apps would be thoroughly vetted such that they will
10 pose no or very little risk --

11 A. Thoroughly vetted --

12 Q. -- in the curated part?

13 A. Thoroughly vetted, sure.

14 Q. Now, the ability to curate is not unique to Google;
15 correct?

16 A. Can you please repeat that?

17 Q. The ability to curate the store is not unique to Google.
18 Other people can do that; correct?

19 A. Other people can do curation, sure.

20 Q. And other stores, other distributors, could offer curated
21 app stores just like the curated experience you suggested in
22 Project Cake; correct?

23 A. I'm sorry. Are you saying does that already exist?

24 Q. I'm saying other stores, other distributors, could offer
25 curated app stores just like the curated experience that you

1 suggested in Project Cake; correct?

2 **A.** Oh, theoretically, yes.

3 **Q.** And, in fact, other stores could offer stores with far
4 fewer than 50,000 apps, and they could be even more thoroughly
5 vetted than what you've suggested under Project Cake; correct?

6 **A.** There could be less than 50,000, yes.

7 **Q.** And Project Cake never launched; correct?

8 **A.** Not in the exact concept that I proposed.

9 **Q.** There is no highly curated, highly vetted portion of the
10 Google Play Store currently open to the general public;
11 correct?

12 **A.** Incorrect.

13 **Q.** Sir, Project Cake did not launch; right?

14 **A.** That is -- my proposal has not launched in that form, but
15 there are other curated spaces.

16 **Q.** And a highly curated app store created by -- for Android
17 by someone other than Google, could be safer and higher quality
18 than the Google Play Store currently is; correct?

19 **A.** I think the Apple App Store is an example of a probably
20 slightly more curated store.

21 **Q.** And there could be such a store on Android; correct?

22 **A.** That seems possible, yes.

23 **Q.** For example, if a Game Store with about 3,000 games
24 launched on Android, that could be much more thoroughly vetted
25 than anything that's done on the Play Store for 5 million or

1 4 million apps; correct?

2 A. In theory, that could be possible.

3 Q. Now, there are several ways for users to install apps on
4 their Android devices; correct?

5 A. Correct.

6 Q. And one way a user can install an app is by downloading it
7 from the Google Play Store?

8 A. Yes.

9 Q. And another one is the user can do it from the web;
10 correct?

11 A. Yes.

12 Q. Now, if a user downloads from the app store, they have no
13 security warnings; correct?

14 A. I guess that's correct.

15 Q. And if a user tries to download an app from the website,
16 from the web, the user would get a warning that the app he or
17 she is trying to install is from what's known as an unknown
18 source; correct?

19 A. The user has to confirm the unknown source first.

20 Q. So they will get a warning that this is an app that's
21 coming from an unknown source, and you need to go and change
22 the settings; correct?

23 A. The user has to confirm the unknown source, correct.

24 Q. And after user enables downloading from unknown source in
25 their phone settings, the user is still going to meet several

1 other warnings before he or she can download and install the
2 app from the web; correct?

3 **A.** I'm not sure what warnings you're referring to.

4 **Q.** Sir, after you enable downloading from unknown sources,
5 the user is still going to meet several other warnings before
6 they can download and install the app from the web; correct?

7 **A.** The user will have to perform some other consents.

8 **Q.** That's a yes, sir?

9 **A.** That's a yes to the consents, yes.

10 **Q.** And you agree that the more difficult a user interface is
11 to navigate, the more likely the user is to cancel out of
12 the -- of the flow; correct?

13 **A.** I think there can be negative friction that would cause a
14 user to cancel out, yes.

15 **Q.** Now, at the time of your deposition, you were not familiar
16 with the detailed user interface for the unknown sources
17 install flow; correct?

18 **A.** Maybe not all the details.

19 **Q.** Sir, you were not familiar with the detailed user
20 interface of unknown sources; correct?

21 **A.** I'm generally familiar with it, but not all the -- maybe
22 not all the specific details of every UI, every user interface.

23 **MR. EVEN:** Your Honor, if I may turn to page 130,
24 line 6 through 14.

25 **THE COURT:** 130?

1 **MR. EVEN:** 130, lines 6 to 14.

2 (Pause in proceedings.)

3 **THE COURT:** No.

4 **BY MR. EVEN:**

5 **Q.** At the time of your deposition you were aware of only two
6 warnings that a user sees before directly downloading something
7 from the web: One that he or she needs to go into the settings
8 and change the settings, and then another warning where the
9 user needs to confirm the download; correct?

10 **A.** Are we talking about just downloading an app --
11 sideloading an app from the Internet?

12 **Q.** Downloading from the web any kind of app, you were aware,
13 at the time of your deposition, of two warnings; right?

14 **A.** There would be the approval of the unknown source and then
15 the operating system would also ask for a confirmation to
16 install.

17 **Q.** Those were the only two you knew about, right, at the
18 time?

19 **A.** I don't recall what I testified at -- what my deposition
20 was at the time.

21 **Q.** Okay. At the time of your deposition you did not recall
22 any other specific warnings other than those two; correct?

23 **A.** Do you mean operating system consents?

24 **Q.** I mean, other than these warnings, you were not aware of
25 any others other than one that the user needs to go into the

1 setting and change the setting and then another warning where
2 the user needs to confirm the download?

3 **A.** So you're asking me if I remember what I said back then or
4 are you asking me what I know now? I'm confused.

5 **Q.** I'm asking whether at the time you did not recall any
6 other warnings.

7 **A.** I don't remember what I said at the time.

8 (Pause in proceedings.)

9 **MR. EVEN:** Your Honor, 130:18 to 131 at 11.

10 (Pause in proceedings.)

11 **THE COURT:** That's fine.

12 **MR. EVEN:** Can we put that up, please?

13 **BY MR. EVEN:**

14 **Q.** Sir, at your deposition were you asked these questions and
15 gave these answers under oath? (as read):

16 **"QUESTION:** So you're aware of at least two warnings: One
17 that the user needs to go into the settings and change the
18 settings, and then another warning where the user needs to
19 confirm the download?

20 **"ANSWER:** Yes.

21 **"QUESTION:** And there may be multiple other warnings, and
22 your testimony is you just don't know about them?"

23 And you said (as read):

24 "I know browsers will often ask before a file is
25 downloaded for a -- they may warn the user before the file

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1 itself is actually downloaded to the machine. I'm aware
2 of that as a common warning that browsers do. I can't
3 recall any other specific warnings right now."

4 Was that your testimony at the time?

5 **A.** It appears to be, yes.

6 **Q.** Now, given that you don't -- you did not clearly recall
7 the user interface of direct downloading and the installation
8 warnings, I take it you did not design the user interface for
9 direct downloading; correct?

10 **A.** I did not design the user interface.

11 **Q.** And if the jury saw evidence of install flows that
12 involved 17 steps or 14 steps, those additional steps were not
13 added to that user interface or install flow by you as the head
14 of security on Android; correct?

15 **A.** I did not implement any flows.

16 **Q.** Google has something called reputation scores for
17 developers that publish on the Google Play Store; correct?

18 **A.** We have risk measurements for developers, correct.

19 **Q.** And Google has a reputation score or a risk measurement
20 for somebody like Adobe, for instance?

21 **A.** If they are published on the store, then we would have
22 some measurement.

23 **Q.** And Adobe is published on the store; correct?

24 **A.** I actually don't know, but it sounds like they would be.

25 **Q.** Okay. And Microsoft is on the store; correct?

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1 A. Microsoft is, yes.

2 Q. So you would have a reputation score for Microsoft?

3 A. We would have some risk measurements for that.

4 Q. And Google never identified any Adobe apps as potentially
5 harmful; correct?

6 A. I don't know.

7 Q. Well, you don't recall sitting here today any instances
8 where Google identified any apps from Adobe as potentially
9 harmful; correct?

10 A. From Adobe, no, I don't recall any.

11 Q. And -- strike that.

12 If a user -- a user would not be able to download anything
13 from microsoft.com or adobe.com without confronting security
14 warnings and enabling downloading from unknown sources;
15 correct?

16 A. To download an app, it would go through the flow that we
17 just discussed.

18 Q. Now, when that warning comes up and says that this is an
19 unknown source, Google does know who Adobe and Microsoft are;
20 correct?

21 A. The warning is an operating system warning.

22 Q. I understand that. And that operating system warning is
23 telling the user that what they're trying to do is download
24 something from an unknown source.

25 And my question to you is: Google does know who Microsoft

1 and Adobe are; correct?

2 **A.** Does -- when you say "Google," I'm not sure what you mean.
3 Like --

4 **Q.** You know who Microsoft and Adobe are?

5 **A.** I personally know who Microsoft is.

6 **Q.** And you know who Adobe is; correct?

7 **A.** I know who Adobe is.

8 **Q.** Now, Google never built a system that would assess the
9 security of adobe.com, for instance; correct?

10 **A.** We have not built such a system.

11 **Q.** And Google chose not to use its existing risk factors or
12 reputation score in any way to inform the risk assessment of a
13 download from adobe.com; correct?

14 **A.** Correct.

15 **Q.** Instead, Google chose to design Android to identify any
16 download from the web as coming from an unknown source without
17 any particularized assessment of risk for that particular
18 download; correct?

19 **A.** There are exceptions but, generally speaking, the
20 operating system views Internet downloads as coming from an
21 unknown source.

22 **Q.** Now, because of the game of Whack-A-Mole that we discussed
23 on the Google Play Store, the Google Play Store does, in fact,
24 have malicious apps on it at all times; right?

25 **A.** Yes.

1 Q. In fact, you once called the Google Play Store -- you
2 mentioned that it's viewed as a Dumpster fire of abuse and
3 malware; correct?

4 A. I've used that hyperbole at one point.

5 Q. Okay. So I want to take a quick look at a demonstrative
6 we put together, and that's Demonstrative Trial Exhibit 10. I
7 think you'll find it at the end of your binder, but you can
8 look at it on the screen.

9 So I want to take a look at this slide. On the left we
10 have "S-ON Sexual Therapy by Sona Grid," which has 2.4 stars
11 and 5,000-plus downloads. That's something that's available on
12 the Play Store now. We captured this yesterday. Okay?

13 A. Okay.

14 Q. And on the right we have the Adobe Acrobat Reader from
15 Adobe that has 4.6 stars and more than 500 million downloads;
16 correct?

17 A. That's what appears on the screen.

18 Q. Now, let's look at some of the reviews on S-ON, and you
19 see that people give it one star and say it's garbage, promise
20 to help you and then tell you to pay without helping,
21 et cetera. Do you see that?

22 A. I see it.

23 Q. And yet a user would not get any warning screen when the
24 user downloads S-ON from the Play Store; correct?

25 A. There would be no consent for the source.

1 Q. And if Adobe Acrobat were available from adobe.com, the
2 users would have to march through the entire unknown sources
3 install flow to download that app; correct?

4 A. Unless they've already enabled unknown sources.

5 Q. In which case they will flip the system change, but they
6 will still go through several warnings; correct?

7 A. If they already enabled unknown sources, then they would
8 just have to install the app.

9 Q. Sir, we'll look at that later and see whether there are
10 warnings or not.

11 Assuming this is an initial install, they will have to go
12 through the entire unknown sources flow; correct?

13 A. By initial install, you mean?

14 Q. The first time they're installing something from the web.

15 A. They'd have to authorize the install first.

16 Q. And so Android is designed to signal to the user that
17 downloading S-ON from the Google Play Store is safer, maybe far
18 safer, than downloading Adobe Acrobat from adobe.com; correct?

19 A. The operating system is designed to treat preloaded app
20 sources differently from non-preloaded app sources. That's
21 just how it was designed.

22 Q. The system is designed to send a message to users that
23 downloading S-ON from the Play Store is perfectly safe whether
24 down -- whereas, downloading Adobe Acrobat from adobe.com is
25 coming from an unknown source and is dangerous to their phone;

1 correct?

2 **A.** There is a user consent in one case and there's not in the
3 other case.

4 **Q.** And the one case where there is no user consent is S-ON
5 from the store, and where there is user consent with warning
6 signs is Adobe Acrobat from adobe.com; correct?

7 **A.** You'd have to have the -- you'd have to authorize the
8 browser to install first.

9 **Q.** Now, you believe, don't you, that downloading an app from
10 the developer's own website is actually the best option -- we
11 can put that down -- is actually the best option from the
12 perspective of authenticity and developer control; correct?

13 **A.** I wouldn't necessarily agree with that.

14 **MR. EVEN:** Your Honor, if we can, page 394. I believe
15 that's Tab B.

16 **THE COURT:** Which lines?

17 **MR. EVEN:** Lines 19 to 25.

18 (Pause in proceedings.)

19 **THE COURT:** Okay.

20 **BY MR. EVEN:**

21 **Q.** This says (as read):

22 **"QUESTION:** And five minutes later you chimed in again and
23 said that's why placing the Canonical app on your website
24 is actually the best from the perspective of authenticity
25 and developer control; correct?"

1 **"ANSWER:** I see the words there, yes."

2 **A.** I see the words.

3 **Q.** Those words are words that you wrote, correct, at the
4 time?

5 **A.** I wrote those words.

6 **Q.** Now, one of the reasons that you thought that it's better
7 to put something on the -- to put the Canonical app on the
8 website is that you thought that the Google Play Store actually
9 is not very good at keeping knockoffs out of the Google Play
10 Store; correct?

11 **A.** So the -- having things on a separate website, it doesn't
12 mean it's necessarily authentic, so...

13 **Q.** Sir, that's not what I asked at all.

14 One of the reasons you thought that putting something on
15 the website is the best option for the developer in terms of
16 authenticity and control is that the Google Play Store is not
17 particularly good at keeping knockoffs off the store; correct?

18 **A.** Putting it on the website doesn't mean it's instantly
19 better for authenticity.

20 **Q.** Sir, it's a yes-or-no question.

21 You believe that the Google Play Store is not very good at
22 keeping out knockoffs; correct?

23 **A.** No. I believe it's pretty good.

24 **Q.** If you can turn to Exhibit 768 in your binder.

25 Do you see that this is a series of Chat messages between

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1 yourself and Mr. Eugene Liderman?

2 **A.** Yes.

3 **MR. EVEN:** Your Honor, I'd like to admit this into
4 evidence at this point.

5 **MR. OLASA:** No objection, Your Honor.

6 **THE COURT:** It's admitted.

7 (Trial Exhibit 768 received in evidence.)

8 **BY MR. EVEN:**

9 **Q.** If you go to page 2, Mr. Kleidermacher, there's a message
10 at 6:52:14, and you see that it says (as read):

11 "The only problem left in my mind on the app store
12 thing is the reality that we're not particularly good at
13 keeping knockoffs off the store."

14 Do you see that?

15 **A.** I do.

16 **Q.** And you said that at the time?

17 **A.** At the time, yes, in 2020.

18 **Q.** Correct. This is one month after this litigation began;
19 correct?

20 **A.** Yes.

21 **Q.** So now that there's litigation, you changed your mind? Is
22 that your testimony?

23 **A.** Well, we've gotten better -- much better at it over time.

24 **Q.** Knockoff apps are inherently more dangerous than original
25 apps; correct?

1 **A.** A knockoff app would be inherently more dangerous than an
2 original app.

3 **Q.** Now, on a PC, Google does not offer the Chrome browser in
4 the Microsoft Windows store; correct?

5 **A.** I don't know.

6 **Q.** Do you know that on the Mac, Google does not offer the
7 Chrome browser in the Mac store?

8 **A.** I do not know.

9 **Q.** Do you know that on both PC and Mac Google offers the
10 Chrome browser for download directly from Google's website?

11 **A.** Sorry. I'm not familiar.

12 **Q.** If that's true, we'd have to assume that Google views this
13 as safe; right?

14 **A.** I actually don't know what you're talking about.

15 **Q.** You don't know what the Chrome browser is?

16 **A.** No, I'm not familiar with the Chrome browser on these
17 other platforms.

18 **Q.** If you can take a look at Exhibit 8591.

19 Do you recognize this as the online instructions by Google
20 to users as to how to install the Chrome browser on a Microsoft
21 Windows computer?

22 **A.** I'd have to take your word for it. I don't -- I'm not
23 familiar with this document.

24 **Q.** Do you see that that is what the document is; right?

25 **A.** It says "Computer" -- it says "Download from a computer."

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1 So I guess that means Windows. I don't really know what that
2 means.

3 **Q.** Okay.

4 **A.** Oh, I see it mentions Windows later on. That makes sense.

5 **MR. EVEN:** Your Honor, I'd like to admit Exhibit 8591.

6 **MR. OLASA:** Objection, Your Honor. Foundation.

7 **THE COURT:** What are you going to ask him about it?

8 **MR. EVEN:** I just want to show what the flow looks
9 like, Your Honor.

10 **THE COURT:** That's fine. Go ahead.

11 **MR. EVEN:** Thank you.

12 **THE COURT:** Make it quick, though. Okay?

13 **MR. EVEN:** Very quick, Your Honor.

14 **BY MR. EVEN:**

15 **Q.** Sir, if you go into -- under Windows, do you see that this
16 says to download the installation file? Do you see that?

17 **A.** Yes, I see that.

18 **Q.** And if prompted, click run or save, and then you get one
19 question: Do you want to allow this app to make changes to
20 your device? Google tells users to click yes. Do you see
21 that?

22 **A.** Yes.

23 **Q.** And then it essentially says "Start Chrome"; correct?

24 **A.** "Start Chrome," I see that, yes.

25 **Q.** And you understand that Google suggests from this flow

1 that there are no changes to the operating system that are
2 necessary and no warning signs; correct?

3 **A.** I'm not sure what you're getting at.

4 **Q.** Sir, I'm getting at a very simple point. There are no
5 changes -- in this flow that's given by Google to its users on
6 Windows, there are no warning signs that a user needs to click
7 through and no changes to the operating system; correct?

8 **A.** Based on the explanation on the page. I mean, I can take
9 the --

10 **Q.** This is Google's explanation on the page; yes?

11 **A.** On how to install on a Windows machine.

12 **Q.** You see that in this explanation, that is what Google
13 tells its users?

14 **A.** I see a bunch of steps that you'd have to follow to
15 install Chrome on a Windows machine.

16 **Q.** And none of them include any warning signs or changes to
17 the operating system settings; correct?

18 **A.** Change to settings?

19 **Q.** Correct.

20 **A.** I do not see changes to settings. I just see a consent.

21 **Q.** Let's talk a little bit about -- you can close out of
22 this.

23 Let's talk a little bit about app review.

24 Any app that would be distributed to consumers through
25 Google Play Store goes through an automated analysis review;

1 correct?

2 A. Yes.

3 Q. And tens of thousands of apps go through that review every
4 day?

5 A. Yes.

6 Q. And at least as of the time of your deposition, a high
7 percentage of apps are subject only to the automated review
8 process; correct?

9 A. Reasonably high percentage, yes.

10 Q. Has that changed since then?

11 A. I don't know what the numbers are.

12 Q. Okay. But a high percentage goes through automated review
13 and then gets on the store; correct?

14 A. If it's -- if it's not flagged for some risk, yes.

15 Q. And a small minority of apps that go through the automated
16 review process are flagged and are sent for further human
17 review; correct?

18 A. I believe it's roughly 25 percent, but something like
19 that.

20 Q. 25 percent. So is 25/75?

21 A. Roughly, yeah.

22 Q. Yeah.

23 Now, Google digitally signs apps that have passed its
24 review process; correct?

25 A. It by default does that. It hasn't always done that, but

1 nowadays it does that.

2 **Q.** And a digital signature by Google means that it's
3 essentially an encrypted piece of code that is used to verify
4 the provenance and authenticity of an app when it's installed;
5 correct?

6 **A.** It is not -- it's not about encryption. It's more about
7 digitally signing the app --

8 **Q.** Okay.

9 **A.** -- for authenticity.

10 **Q.** For authenticity and provenance; correct?

11 **A.** Correct.

12 **Q.** And by provenance and authenticity, what that really means
13 is that the signature confirms that the app has not been
14 altered in any way after the review was completed; correct?

15 **A.** It authenticates that the app came from Google and hasn't
16 been tampered with.

17 **Q.** I think we're saying the same thing.

18 Now, Google currently sends its reviewed apps and signed
19 apps only to the Google Play Store for distribution; correct?

20 **A.** Can you please repeat that?

21 **Q.** When the review process ends, Google takes the signed
22 package and sends it to the store for distribution; correct?

23 **A.** Correct.

24 **Q.** Google could send a signed app back to the developer if it
25 wanted to; correct?

1 **A.** Send it back... That may happen in some cases. I don't
2 know.

3 **Q.** But there's no technical impediment for Google taking a
4 signed review packet and sending it back to the developer;
5 correct?

6 **A.** If it's a single package, then it seems plausible.

7 **Q.** And if Google did that, the developer could then
8 distribute that fully reviewed Google-signed app from a
9 location other than the Google Play Store; correct?

10 **A.** Yes.

11 **Q.** Do you know that Apple, in fact, has a similar mechanism
12 called notarization on Mac computers?

13 **A.** At a high level, I'm familiar with that.

14 **Q.** And what happens in notarization in Apple, the developer
15 sends the app to Apple, Apple scans it, signs it, sends it back
16 to the developer; correct?

17 **A.** I don't know about the scanning part; but, yes, I believe
18 it is signed by Apple.

19 **Q.** The developer then distributes the app wherever they want
20 on Mac; correct?

21 **A.** I believe that's how it works.

22 **Q.** Now, Google is not the only company in the world that
23 knows how to review apps; correct?

24 **A.** No.

25 **Q.** No, it's not correct or, no, it's not the only company?

1 A. No -- sorry. No, we're not the only entity in the world
2 that knows how to do the review apps.

3 Q. So, for example, the App Defense Alliance has introduced
4 something called a Mobile Application Security Assessment;
5 correct?

6 A. That is correct.

7 Q. And Google recently has introduced a new independent
8 security review badge on the Play Store for certain apps that
9 undertake independent voluntary security review with the App
10 Defense Alliance; correct?

11 A. Yes.

12 Q. And I take it that Google believes that the App Defense
13 Alliance knows what it's doing?

14 A. It knows what it's doing about that particular security
15 standard, yes.

16 Q. And Google could also identify other third-party review
17 firms that it trusts to conduct an independent security review;
18 correct?

19 A. Yes.

20 Q. And those third -- trusted third parties could review and
21 sign apps available for direct downloading; correct?

22 A. They could review and sign apps.

23 Q. They can review -- take apps from developers, review them,
24 sign them so that people will know that they're authentic and
25 their provenance have not been tampered with, as you said, and

1 then those apps could be directly downloaded or sold or
2 distributed through another store; correct?

3 **A.** That seems possible.

4 **Q.** Now, in addition to your review process, Google has
5 already -- has also invested a lot of resources making it more
6 difficult to -- more difficult to exploit the Android operating
7 system itself; correct?

8 **A.** Yes.

9 **Q.** And Google has also invested in mechanisms that identify
10 malware on Android devices regardless of their source; correct?

11 **A.** We do invest some resources there.

12 **Q.** And one such mechanism is what's called Google Play
13 Protect; correct?

14 **A.** Google Play Protect is technology that's used for both the
15 Google Play Store and for other sources.

16 **Q.** And so it checks for malware regardless of the source,
17 both from the Play Store and from other sources and on the
18 device; correct?

19 **A.** They're different reviews, but it does check.

20 **Q.** And Google Play Protect is a technology that's preloaded
21 on all Android devices; correct?

22 **A.** No.

23 **Q.** It's preloaded on all Android devices that have the Google
24 services; correct?

25 **A.** Yes.

1 Q. And currently Google Play Protect is the primary way that
2 Google identifies malware on Android devices; correct?

3 A. Yes.

4 Q. And Google Play Protect identifies malware on Android
5 devices with a malware scanning functionality; correct?

6 A. We do malware review. It's a review program. It contains
7 many pieces, yes.

8 Q. Now, historically, Google Play Protect checked every app
9 at installation regardless where it came from by comparing it
10 to a block list of millions of apps that are known to be
11 malicious or suspicious based on Google's experience; correct?

12 A. That is one thing that Google Play Protect does, yes.

13 Q. Today Google Play Protect also uses realtime scanning at
14 the code level to identify novel malicious apps; correct?

15 A. That is another technology that Google Play uses.

16 Q. And there are others as well on top of this; right?

17 A. There are others, yes.

18 Q. And all these processes keep evolving and getting better
19 because Google Play Protect scans 125 billion apps daily or
20 thereabouts; correct?

21 A. The general technology is improving every day.

22 Q. Google Play Protect can also use the block list to
23 whitelist certain apps as safe; correct?

24 A. Google Play Protect -- are you talking about for non-Play,
25 for sideloaded apps.

1 Q. I'm talking for anything. Google Play Protects has the
2 capability for Google to come and say "Here is the signature of
3 a specific APK. You must treat this one as safe going on --
4 going forward"; correct?

5 A. I think that is theoretically possible to do.

6 Q. In fact, Google asked Epic at some point to provide the
7 information necessary for its security team to be able to
8 identify the authentic version of the Fortnite app from
9 fortnite.com; correct?

10 A. Can you please repeat that?

11 Q. Google asked Epic to provide the information necessary for
12 its security team to be able to identify the authentic version
13 of Fortnite that was downloaded from fortnite.com?

14 A. You're saying did we ask -- did Google ask Epic to provide
15 the unique fingerprint of the app?

16 Q. Correct.

17 A. That seems like something that could have happened. I
18 don't recall.

19 Q. So take a look at 1172 in your binder.

20 A. Did you say 1172?

21 Q. Correct.

22 A. (Witness examines document.) Okay.

23 Q. And do you see that this is a series of e-mails, and you
24 are on the top one dated August 2018?

25 A. Yes.

1 **MR. EVEN:** Your Honor, I move to admit Exhibit 1172.

2 **MR. OLASA:** No objection, Your Honor.

3 **THE COURT:** It's admitted.

4 (Trial Exhibit 1172 received in evidence.)

5 **BY MR. EVEN:**

6 **Q.** If you go to page 4, it's 2:48, there's an e-mail from
7 Mr. Porst. Do you see that?

8 **A.** Yes.

9 **Q.** And do you see that Mr. Porst is saying (as read):

10 "I would appreciate it if we could whitelist the
11 official Fortnite before launch. I don't want to get in a
12 situation where any of the automated scores or any human
13 review flags Fortnite accidentally"?

14 Do you see that?

15 **A.** Yes.

16 **Q.** And so does that refresh your recollection that, in fact,
17 this whitelisting is something that can be done, and apparently
18 your team has done in the past, for apps that come outside of
19 Play?

20 **A.** This whitelist is referring to specifically ensuring that
21 Google Play Protect wouldn't warn the app for being malicious.

22 **Q.** Correct.

23 All right. And so Google can decide that a certain app is
24 safe and whitelist it in Google Play Protect so Google Play
25 Protect won't flag it as malware by mistake; correct?

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1 **A.** Yes.

2 **Q.** And when Google does that with that information, Google
3 still does not exempt that app from going -- needing to go
4 through unknown sources for the installation; correct?

5 **A.** Correct. This was done just to avoid a mistake during the
6 launch.

7 **Q.** All right. Let's talk a little bit about the Epic launch.
8 Okay?

9 In 2018 after Epic announced it would launch Fortnite on
10 Android but not on the Google Play Store, Google formed what
11 was known as the Fortnite Task Force; correct?

12 **A.** Yes.

13 **Q.** And the task force was formed before the launch; correct?

14 **A.** Yes.

15 **Q.** And the task -- the purpose of the task force was to track
16 badness related to Fortnite; correct?

17 **A.** Correct.

18 **Q.** If you go to Exhibit 761 in the binder. This one was
19 previously admitted.

20 If we go to page 3, you see there's an e-mail there from
21 Mr. Samat at 8:50?

22 **A.** Yes.

23 **Q.** You can also see it on the screen if that's more
24 convenient, Mr. Kleidermacher.

25 And Mr. Samat writes (as read):

1 "Main point, something is wrong. The Epic installer
2 never asked me to turn on unknown sources."

3 Right?

4 **A.** Yes, I see that.

5 **Q.** Now, still on page 3 at 9:00 a.m., you respond to
6 Mr. Samat. Do you see that?

7 **A.** (Witness examines document.)

8 **Q.** Again, it's on your screen.

9 **A.** Just above, yes, I see it.

10 **Q.** And you say (as read):

11 "Samsung store has install apps permission, so
12 perhaps the Epic installer is leveraging that (e.g., via
13 Samsung API) versus doing a direct install on its own."
14 Did I read that correctly?

15 **A.** Yes.

16 **Q.** And that was right; right? You saw this, understood it,
17 and a day later the rest of the team understood that's exactly
18 what the launcher was doing; correct?

19 **A.** Yes.

20 **Q.** And then you say (as read):

21 "That would be a clever way for them to avoid the
22 unknown sources friction entirely."

23 Correct?

24 **A.** Yes.

25 **Q.** In your e-mail you did not express any concern about this

1 usage of the installer; correct?

2 **A.** I had concerns, but not in this e-mail.

3 **Q.** In this e-mail there's no concern that you --

4 **A.** In this particular e-mail, there is no concern. Oh, there
5 is a concern. I guess "Adding GPP leads to investigate" I
6 guess expresses some level of concern.

7 **Q.** That's not saying that you know of a security issue;
8 correct?

9 **A.** Could you please repeat that?

10 **Q.** You did not tell anyone that you think there is a security
11 issue; correct?

12 **A.** I don't really know what I was thinking when I asked them
13 to investigate. Usually when I ask them to investigate, it's
14 for some concern, a safety concern, the Google Play Protect
15 team.

16 **Q.** You did not have a specific concern at least?

17 **A.** Yeah, I don't know what I was thinking at that point.

18 **Q.** Okay. Now, following this, the launcher and the APK for
19 Fortnite went to the task force, and security members of the
20 task force took a deep dive into the installer; correct?

21 **A.** There was a review performed on the installer, yes.

22 **Q.** And on August 13, if you go to page 2, you see that
23 8:03 a.m. Mr. Cunningham is reporting (as read):

24 "Took a deep dive on Friday and discovered a
25 vulnerability in the Fortnite installer."

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1 Do you see that?

2 A. Yes.

3 Q. Now, do you see that this is a Monday e-mail; correct?

4 A. Yes.

5 Q. And so Mr. Cunningham reports that he found the
6 vulnerability three days earlier; correct?

7 A. Three days later.

8 Q. Three days earlier. He says "On Friday" -- "I took a deep
9 dive on Friday" --

10 A. Oh, I see what you're saying. Yes. You're comparing to
11 Friday, okay.

12 Q. I take it Mr. Cunningham did not think this security
13 vulnerability was super urgent that it warranted weekend
14 alerts?

15 A. I recall all of us being very concerned about it.

16 Q. He waited three days; correct?

17 A. He started on Friday. I don't -- I can't tell from what's
18 written here how long he spent on it.

19 Q. He said, "I took a deep dive -- deeper look on Friday and
20 discovered"; correct?

21 A. That's what it says on the page.

22 Q. After reporting that he discovered the vulnerability,
23 Mr. Cunningham goes onto say (as read):

24 "A Project Zero style external bug would be the most
25 fun," exclamation point.

1 Correct?

2 A. I see that.

3 Q. Project Zero is a team of security researchers at Google
4 who perform vulnerability research on popular software?

5 A. Yes.

6 Q. And they're completely separate from your team; correct?

7 A. Correct.

8 Q. About 20 minutes later Mr. Tian Lim responds
9 congratulating Mr. Cunningham for really good work. Do you see
10 that?

11 A. Yes.

12 Q. And another 20 minutes after that on page 1, Mr. Rosenberg
13 chimes in and says "Lots of pieces to coordinate." Do you see?
14 Do you see that?

15 A. Yes, I see that.

16 Q. And the first piece that Mr. Rosenberg says needs to be
17 coordinated is PR; correct?

18 A. Are you talking about the parenthetical that says "PR
19 partners, Epic, et cetera"?

20 Q. Yes.

21 A. I see that.

22 Q. And PR is public relations; correct?

23 A. Correct.

24 Q. Not security?

25 A. Public relations.

1 Q. Mr. Wallows then responds and says (as read):

2 "We are tracking a newly formed WG around Fortnite
3 here."

4 Do you see that?

5 A. Yes.

6 Q. "WG" means working group?

7 A. Yes.

8 Q. And where he writes "here" and we see an underline, that's
9 a link to a Google doc or something like that; correct?

10 A. Presumably.

11 Q. So turn to Exhibit 122 in your binder.

12 A. Okay.

13 Q. This is a document from your files titled "Fortnite Task
14 Force," and it's essentially a rolling notes from those
15 meetings?

16 A. Yes.

17 MR. EVEN: Your Honor, I'd like to admit 122 at this
18 point.

19 MR. OLASA: No objection, Your Honor.

20 THE COURT: It's admitted.

21 MR. EVEN: Thank you, Your Honor.

22 BY MR. EVEN:

23 Q. And you attended multiple of the meetings that are on this
24 document; correct?

25 A. I believe I did, yes.

1 Q. If you turn to page 16, you see in the middle of the page
2 there's a list of attendees at a meeting of the Fortnite Task
3 Force?

4 A. Yes.

5 Q. And so you were in attendance along with Jamie Rosenberg
6 Mr. Sameer Samat, Purnima Kochikar, Mr. Cunningham, and others;
7 correct?

8 A. Correct.

9 Q. Some of the others are Tristan Ostrowski; right?

10 A. Yes.

11 Q. And he's a lawyer for Play; correct?

12 A. He's a lawyer for our general area, yes.

13 Q. Okay. And Lydia Ash was there; correct?

14 A. Yes.

15 Q. And Lydia Ash, I understand, is a staffer in Mr. Pichai's
16 office; correct?

17 A. No.

18 Q. What is your understanding of Ms. Ash's --

19 A. Lydia is the chief of staff for Sameer.

20 Q. For Sameer. Okay. And Sameer you mean Mr. Samat?

21 A. Mr. Samat.

22 Q. Okay. And Colin Smith was there?

23 A. Correct.

24 Q. And he is in public relations again; correct?

25 A. Public relations, yes.

1 Q. The third bullet under "Raw Meeting Notes" states (as
2 read):

3 "Need to get the word out on PR side, even as we're
4 working to fix it."

5 Do you see that?

6 A. Yeah, I see that.

7 Q. And "fix it," that's a reference to the vulnerability;
8 correct?

9 A. I believe so.

10 Q. You see in the first bullet point it says (as read):

11 "Fortnite's distribution strategy has created a
12 vulnerability."

13 Do you see that?

14 A. Yes.

15 Q. And you understand that the need to get the word out on
16 the PR side, that's a reference to the word out on the
17 vulnerability; correct?

18 A. That is logical, yes.

19 Q. The eighth bullet point says (as read):

20 "It's not hard for Epic to fix this issue. They
21 should have it fixed within 90 days."

22 Do you see that?

23 A. I see it.

24 Q. And 90 days are referred to because it is industry
25 standard to wait 90 days before publicly disclosing a

1 vulnerability; correct?

2 **A.** No, that's not correct.

3 **Q.** 90 days' disclosure deadline is not the standard?

4 **A.** 90 days is the deadline for fixing the bug, for fixing the
5 vulnerability.

6 **Q.** You don't think that 90 days is the industry standard for
7 disclosure?

8 **A.** It is typically used as a deadline to encourage developers
9 to fix the bug within 90 days.

10 **Q.** So you give them 90 days to fix it and then you disclose;
11 correct?

12 **A.** The disclosure could happen afterwards.

13 **Q.** The disclosure could happen more than 90 days after?

14 **A.** No. It can happen also sooner.

15 **Q.** If you go --

16 **MR. EVEN:** Your Honor, if I may, at page 344, line 24,
17 to 345 at 8.

18 (Pause in proceedings.)

19 **THE COURT:** Go ahead. That's fine.

20 **BY MR. EVEN:**

21 **Q.** Sir, were you asked and gave these answers in your
22 deposition under oath? (as read):

23 **"QUESTION:** You say that public disclosure of the flaw is
24 90 days per industry standard; right?"

25 You say: "I see that."

1 **"QUESTION:** And that was your position as of August 15,
2 2018; correct?

3 **"ANSWER:** The 90-day disclosure deadline or time limit is
4 industry standard, yes."

5 Was that your testimony?

6 **A.** I see that, yes.

7 **Q.** And that speaks to disclosure; correct? That's what you
8 were saying?

9 **A.** Yes, but the 90 days is used for the deadline to fix.

10 **Q.** Sir, you testified the 90-day disclosure is industry
11 standard; correct?

12 **A.** Many times the fix and disclosure are combined.

13 **Q.** Can we put it up again?

14 Did you or did you not -- my question is very simple. Did
15 you or did you not testify under oath that 90-day disclosure is
16 industry standard?

17 We can put it back up if we need to.

18 **A.** I see what it says on the page, yes.

19 **Q.** Towards the bottom of this page 16 there's a bullet that
20 starts with "Sameer." Do you see is that?

21 **A.** Sameer -- yes, I see it -- questioned.

22 **Q.** Yes. And this is a reference to Mr. Samat; correct?

23 **A.** Yes, it is.

24 **Q.** And per these notes, Mr. Samat said (as read):

25 "Question is what we want to do pulling back a bit.

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1 Ultimately we want Samsung to stop this kind of stuff
2 enabling the Fortnite installer."

3 Do you see that?

4 **A.** I see it.

5 **Q.** The bullet continues, and two lines down it says (as
6 read):

7 "We want the world to know that this is not safe to
8 do this. We need to make it safe and have an aggressive
9 future action for GPP. We need to lay down a case for the
10 reasons why we have to do this."

11 Do you see that?

12 **A.** Yes, I see that.

13 **Q.** And then on Samsung he says (as read):

14 "What is the best way to make them feel a tremendous
15 amount of heat?"

16 Correct?

17 **A.** Yes.

18 **Q.** And the "this" that Mr. Samat is talking about that must
19 be stopped is distribution of apps off-Play; correct?

20 **A.** I believe he's referring to the vulnerability, stopping
21 that.

22 **Q.** That's your understanding of what he said, sir?

23 **A.** It was a dangerous vulnerability, and I know he was
24 worried about the vulnerability.

25 **Q.** That's your statement, that when he said, "This is

1 complicated, we want to send a message to the world not to do
2 this," this is about this vulnerability?

3 **A.** We were very concerned about the vulnerability, yes.

4 **Q.** And he says again (as read):

5 "We want Samsung to stop this kind of stuff enabling
6 the Fortnite installer..."

7 That's not the vulnerability. That's stopping Samsung
8 from allowing people to have launchers or apps exclusively on
9 their store; correct?

10 **A.** The vulnerability was specific to the way they were
11 distributing the app store with that API.

12 **Q.** If you go to the fourth bullet up on the raw meeting
13 notes, you see that this says (as read):

14 "This is essentially a Man-in-the-Disk vulnerability
15 that we had identified in theory but had not seen an
16 exploit."

17 Right?

18 **A.** Yes. I see that.

19 **Q.** That means you haven't seen anyone exploiting this;
20 correct?

21 **A.** This particular bug?

22 **Q.** This particular bug or any bug like it.

23 **A.** It's very rare for us to see evidence of an exploit.

24 **Q.** We may talk a little bit about that later.

25 The "putting an incredible amount of heat on Samsung," you

1 understood that that was a desire to send a clear message to
2 Samsung that Google should be the entity handling distribution
3 of apps; correct?

4 **A.** You're talking about what Sameer said?

5 **Q.** Yes.

6 **A.** I don't think I should speculate for Sameer. I know he
7 was concerned about the vulnerability.

8 **Q.** You are speculating for Sameer on that, but --

9 **A.** I know he was concerned about the vulnerability part.

10 **Q.** All right. We'll talk a little bit about that later.

11 If you go to page 17, you see this says towards the bottom
12 of the page (as read):

13 "The first to do is Ed, Dave K, we should give them
14 15 days to fix."

15 **A.** I see that.

16 **Q.** And 15 days is 75 days less than the industry standard;
17 correct?

18 **A.** Yes.

19 **Q.** Now, if you go to page 18, you say on page 18 under point
20 three (as read):

21 "On day 15, regardless of whether Samsung or Fortnite
22 has taken action, a blog post will be published outlining
23 this vulnerability."

24 Do you see that?

25 **A.** I see it.

1 Q. And so instead of giving 90 days, planning to give 90
2 days, as industry standard and get this fixed, which would be
3 the correct response to a real security concern, what Google
4 said is "On day 15, regardless of what has been done to fix,
5 we're going to publish"; correct?

6 A. That was -- that didn't happen. I don't know why it was
7 written here. Like, maybe it was discussed.

8 Q. I agree it didn't happen. It didn't happen because you
9 thought, as a security measure, that is the wrong approach;
10 correct?

11 A. I don't recall having an opinion on this point.

12 Q. You don't recall that you had a position that public
13 disclosure of the flaw should be 90 days per industry standard?

14 A. So for security vulnerabilities, generally 90 days to fix,
15 but we also have malware fixes that have to be done within
16 15 days. And I think we were debating quite a bit between
17 whether we view that as a potentially harmful app or a
18 vulnerability.

19 Q. Sir, if you turn to Exhibit 762, page 1.

20 You see this is an e-mail from you to -- between you,
21 William Luh, and others?

22 A. Yes.

23 MR. EVEN: Your Honor, I'd like to admit 762 at this
24 point.

25 MR. OLASA: No objection, Your Honor.

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1 **THE COURT:** It's admitted.

2 (Trial Exhibit 762 received in evidence.)

3 **BY MR. EVEN:**

4 **Q.** Do you see that there's an e-mail from you that says (as
5 read):

6 "There's a bit of debate remaining on this 15 versus
7 90 day issue"?

8 Do you see that?

9 **A.** Yes.

10 **Q.** And you say (as read):

11 "My position is: Public disclosure of the flaw
12 (e.g., blog details, buganizer) is 90 days per industry
13 standard."

14 **A.** I see that.

15 **Q.** So there was a debate, and you said 90 and others said 15;
16 correct?

17 **A.** You can see there's more debate in that note.

18 **Q.** I understand. Your position was 90; correct?

19 **A.** That's what -- at the time that's what I guess I said,
20 yes.

21 **Q.** Okay. You can take that down.

22 Now, you worked with Mr. Cunningham on crafting a message
23 to Epic; correct?

24 **A.** I don't recall.

25 **Q.** Well, you recall that Google sent a message to Epic on

1 August 15?

2 **A.** I know we were communicating with Epic in this time frame,
3 but I don't remember specifically who sent the messages.

4 **Q.** Okay. But you remember that what we saw was that one of
5 the points were that you and Mr. Cunningham were supposed to
6 work on a script for Epic; correct?

7 **A.** Oh, yes, from that previous page we just looked at, yes.

8 **Q.** Correct. And if that was the decision, safe to assume
9 that you did work on that; correct?

10 **A.** I don't recall personally working on it.

11 **Q.** Let's take a look at 8576.

12 Do you recognize that as the bottom half, as the e-mail
13 that actually went to Epic?

14 **A.** I see the note that Edward sent to Epic at the bottom.

15 **Q.** And you would have seen it at the time; right? This did
16 not go out without you looking at it?

17 **A.** I actually don't know if I looked at it before it went
18 out.

19 **Q.** Sir, you were tasked with writing this. Do you think that
20 this went out to Epic with a script that you and Ed worked on
21 together without Mr. Cunningham -- sorry -- without you looking
22 at it?

23 **A.** I don't recall looking at it.

24 **Q.** You see that it has the -- it is August 15; correct?

25 **A.** Yes.

1 Q. So two more days --

2 MR. EVEN: Well, I would like to admit this into
3 evidence, Your Honor.

4 MR. OLASA: Objection, Your Honor. Foundation.

5 THE COURT: Why don't you lay a little bit more
6 foundation.

7 BY MR. EVEN:

8 Q. Sir, you were involved in these meetings around the task
9 force; correct?

10 A. I was involved in some of the meetings, yes.

11 Q. And you worked with Mr. Cunningham on the security aspects
12 related to the vulnerability; correct?

13 A. Yes.

14 Q. And you and Mr. Cunningham had discussed the 15 versus
15 90 days to be sent to Epic as a timeline for fixing; correct?

16 A. I don't recall speaking to him one on one about it.

17 Q. One on one, generally --

18 A. There was a lot of communication about it in the task
19 force.

20 Q. And you understood that a message has been sent to Epic to
21 alert them; correct?

22 A. I do understand that a message was sent.

23 Q. No, no. You understood at the time that a message was
24 sent; correct?

25 A. Yeah, I know a message was sent at some point.

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1 **Q.** And you would have known at the time, as the head of
2 security, that the message was sent at the time that it was
3 sent; correct?

4 **A.** Presumably I would have known in this general time frame,
5 within days I would expect.

6 **MR. EVEN:** Your Honor, I would like to admit it at
7 this point, please.

8 **MR. OLASA:** No objection, Your Honor.

9 **THE COURT:** Okay. It's admitted.

10 (Trial Exhibit 8576 received in evidence.)

11 **BY MR. EVEN:**

12 **Q.** Now -- so this is August 15; correct?

13 **A.** Yes.

14 **Q.** And that's when it was sent; correct?

15 **A.** Yes.

16 **Q.** And in this message you see that you actually prevailed,
17 and had at the bottom it says (as read):

18 "Please note that the bug is subject to a 90-day
19 disclosure deadline."

20 Correct?

21 **A.** Yes, I see that.

22 **Q.** So your position prevailed, correct, at that point?

23 **A.** I guess -- there was a lot of debate about that. I didn't
24 have a super strong opinion about it on the 90 and 15 days but,
25 sure.

1 Q. And then it says (as read):

2 "After 90 days elapse or a patch has been made
3 broadly available, the bug report will become visible to
4 the public."

5 A. I see that.

6 Q. Now, you recall that Epic -- this took five days to get to
7 Epic. Epic, unlike Google, took this very seriously and moved
8 very swiftly and fixed the bug within a day?

9 A. Sorry. Did you say "unlike Google"?

10 Q. Correct. Google took five days we just saw. Epic fixed
11 it --

12 A. We took it very seriously.

13 Q. You took it very seriously. You took five days to send
14 this to Epic; correct?

15 A. Google took this vulnerability very seriously.

16 Q. Google took five days to send notice of the vulnerability
17 to Epic, the party that was actually supposed to fix it;
18 correct?

19 A. If you say five days, but we took it very seriously.

20 Q. We saw that Mr. Cunningham found it on the 10th, on the
21 Friday, and it was sent to Epic on the 15th; correct?

22 A. Okay.

23 Q. That's five days?

24 A. We took it very seriously, but sounds like five days.

25 THE COURT: Okay. Listen to the question, please.

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1 It's either yes or no or I don't know. You're arguing too
2 much. Okay? It's a very simple question.

3 **THE WITNESS:** Okay.

4 **THE COURT:** So let's start it -- take it from the top,
5 please.

6 **MR. EVEN:** Thank you, Your Honor.

7 **BY MR. EVEN:**

8 **Q.** Google took five days from the time Mr. Cunningham found
9 the vulnerability until it noticed it to Epic; correct?

10 **A.** I assume that's correct.

11 **Q.** And then Epic --

12 **THE COURT:** Why are you assuming?

13 **THE WITNESS:** Because I don't remember the five days.

14 **THE COURT:** Then just say that, "I don't know."

15 **THE WITNESS:** Okay. I don't know if it's five days.

16 **THE COURT:** The witness doesn't know. Okay?

17 **BY MR. EVEN:**

18 **Q.** You saw that the notice went out on the 15th; correct?

19 **A.** I see that.

20 **Q.** And Epic then fixed it around the 16th; correct? Do you
21 recall that?

22 **A.** I recall that it was fixed rapidly.

23 **Q.** Okay. And Epic then asked Google to wait the full 90 days
24 before disclosing the vulnerability so users could have a
25 chance to patch their devices; correct?

1 **A.** I recall that, yes.

2 **Q.** And as the head of security, your view at the time was
3 that it behooved Google to give Epic some time to distribute
4 the update and push to users so that they can update before the
5 vulnerability becomes public; correct?

6 **A.** We would want to give time for the patch to be
7 distributed.

8 **Q.** And your belief at the time was that while Google
9 sometimes disclosed some vulnerabilities in as little as
10 30 days, here Google could wait as long as it needed to strike
11 the right balance in protecting users and avoiding panic;
12 correct?

13 **A.** We would always want to strike the right balance, correct.

14 **Q.** And you shared your views on this with the task force;
15 correct?

16 **A.** We discussed this a lot.

17 **Q.** That's a, yes, you shared this with the task force?

18 **A.** We discussed the vulnerability disclosure dates with the
19 task force.

20 **Q.** Okay. If you go back to 122. This time go to page 9.

21 At the bottom of the page contains notes from another
22 meeting of the Fortnite Task Force; correct?

23 **A.** Okay.

24 **Q.** And the first bullet meeting note says (as read):

25 "Tristan checked in with Kristen legal counsel. We

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1 give 7 to 14 days to get the message out."

2 Do you see that?

3 A. I see it.

4 Q. And Tristan is a lawyer; correct?

5 A. Yes.

6 Q. And Kristen, based on this parenthetical, is a lawyer?

7 A. Yes.

8 Q. And then it says (as read):

9 "We don't wait longer just because."

10 A. I see that.

11 Q. Just because it's not a security reason; correct? It's
12 not a security term of art?

13 A. It doesn't appear so.

14 Q. If you go to page 8, this is another summary of another
15 meeting. This time Ms. Shannon Newberry was added to the
16 attendees. Do you see her name up there?

17 A. I do.

18 Q. And Ms. Newberry is a communications PR person; correct?

19 A. I believe so.

20 Q. And at that meeting Google decided to make Fortnite's
21 vulnerability public early on August 24; correct?

22 A. I see that, yes.

23 Q. And so August 24 is not 90 days after August 15th;
24 correct?

25 A. Nine days.

1 Q. Nine days?

2 A. Yes.

3 Q. It's not 90. It's not 15. It's not 14 as Kristen and
4 Tristan said just because. It's nine days after the disclosure
5 to Epic; correct?

6 A. Yes.

7 Q. And what Google decided here in the first bullet point
8 is -- sorry -- in the last bullet point under "Decided" is that
9 (as read):

10 "Ed to flip the bug on 8/24 at early morning LON time
11 just past the precise 8/23, 4:12 p.m., seven-day
12 extension."

13 Do you see that?

14 A. Yes.

15 Q. So essentially what this is saying is "We'll wait on the
16 dot one second after we have seven days, then Shannon can tip
17 people off on Friday if nobody has picked it up organically";
18 correct?

19 A. That's what it says.

20 Q. That is not standard security practice for Google;
21 correct?

22 A. Incorrect.

23 Q. All right. We'll talk about that in a second.

24 **THE COURT:** Let's take our afternoon break. We'll
25 come back at 2:30.

KLEIDERMACHER - DIRECT / EVEN

1 **THE CLERK:** All rise.

2 (Recess taken at 2:15 p.m.)

3 (Proceedings resumed at 2:35 p.m.)

4 (Proceedings were heard in the presence of the jury:)

5 **THE COURT:** Okay. Let's resume.

6 **BY MR. EVEN:**

7 **Q.** Mr. Kleidermacher -- Mr. Kleidermacher, if you can turn to
8 page 6 on Exhibit 122.

9 And you see there are more meeting notes here under "Bug
10 filed." It says that, in fact, Mr. Cunningham did make the bug
11 public, and Ms. Newberry did tip off Android Central and the
12 security reporter at Wired. Do you see that?

13 **A.** I see that.

14 **Q.** And it also says further down that the story was, in fact,
15 picked up by Android Central while the meeting was ongoing;
16 correct?

17 **A.** Yes.

18 **Q.** And as you told me at your deposition, as the head of the
19 security of Android at Google, you cannot recall a single other
20 time in Google's history where, in addition to releasing a blog
21 post, Google decided to tip off the press about a security
22 vulnerability; correct?

23 **A.** I believe that PR as a normal --

24 **Q.** Sir --

25 **A.** I say, no. I would have to say no.

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1 **MR. EVEN:** Your Honor, 362.

2 **THE COURT:** 262?

3 **MR. EVEN:** 362, line 17, through 363, line 8.

4 (Pause in proceedings.)

5 **THE COURT:** That's fine.

6 **BY MR. EVEN:**

7 **Q.** Sir, at your deposition did you give me these answers
8 under oath? I asked (as read):

9 **"QUESTION:** And you sitting now, can you remind me -- can
10 you tell me another case where there was a vulnerability
11 that Google on top of releasing a blog post decided to tip
12 reporters so that -- to make sure that they pick up on the
13 blog post?

14 **"ANSWER:** Again, I don't recall specifically.

15 **"QUESTION:** So you can't tell me another incident like
16 that right now?

17 **"ANSWER:** Not particularly."

18 Were these the answers you gave at the time?

19 **A.** At the time, yes.

20 **MR. EVEN:** I pass the witness.

21 **THE COURT:** Okay.

22 **MR. OLASA:** May I proceed, Your Honor?

23 **THE COURT:** Yes.

24 \\

25 \\

KLEIDERMACHER - CROSS / OLASA**CROSS-EXAMINATION**

BY MR. OLASA:

Q. Good afternoon, Mr. Kleidermacher.

A. Good afternoon.

Q. Counsel for Epic asked you whether it was safer to download apps from a developer website. Do you recall that?

A. Yes.

Q. Can users be tricked into visiting the wrong website for a developer?

A. Yes. That happens a lot.

Q. And is it a common form of deception?

A. It is.

Q. And can users visit the wrong website by just mistake?

A. Yes.

Q. Let's take the plaintiff in this case, Epic. Is Epic's website epic.com?

A. It is not.

Q. What is Epic's website?

A. Epicgames.com.

Q. And before Fortnite launched on Android in 2018, were there fake websites offering fake versions of Fortnite?

A. Yes.

Q. Let's talk about the Fortnite Task Force counsel for Epic was just asking you about.

Did you participate in this task force?

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1 **A.** Yes.

2 **Q.** And why was the task force created?

3 **A.** We created it to monitor the security and safety risks
4 related to the Fortnite launch.

5 **Q.** And what were those risks?

6 **A.** Malware risks. We were worried very much about the
7 malware risks that we talked about. We were also worried about
8 the user just being generally more at risk from the unknown
9 source being turned on.

10 **Q.** Why would the unknown source be turned on?

11 **A.** In order to sideload, you would turn on the unknown
12 sources and that would possibly expose the user to more
13 malware.

14 **Q.** Let's look at Exhibit 122. It's in the binder before you.
15 And we can put it up on the screen.

16 **MR. OLASA:** Oh. I'm sorry. We should hand out some
17 binders.

18 **THE COURT:** Thank you.

19 **BY MR. OLASA:**

20 **Q.** Mr. Kleidermacher, do you recall looking at Exhibit 122
21 with Epic's counsel?

22 **A.** Yes.

23 **Q.** And what is this document?

24 **A.** This document is a running notes document relating to the
25 task force.

1 Q. And was this task force created by the Android security
2 team?

3 A. It was created by my team, yes.

4 Q. And that's the team you supervise?

5 A. Yes.

6 Q. It's a little blurry, but what is that symbol at the very
7 top of the document?

8 A. That symbol says "Google Play Protect."

9 Q. What is Google Play Protect?

10 A. That is our -- the product that does anti-malware, and
11 that's the icon for it.

12 Q. And is Google Play Protect something within the Android
13 security team?

14 A. Yes, it is.

15 Q. Now, on the first page do you also see an objective
16 listed?

17 A. Yes.

18 Q. The objective is (as read):

19 "To quantify and protect users who install Fortnite
20 (unknown sources required for installation) or a fake MUWS
21 Fortnite."

22 Do you see that?

23 A. Yes.

24 Q. There's some tech jargon here. Can you tell the jury what
25 that means?

1 **A.** Sure. As I mentioned, we were worried about two primary
2 risks to the user. First, we were worried about the use of
3 unknown sources and how that might increase the instances of
4 malware.

5 And then, secondly, we were also worried about just
6 general attacks on the user through malware that could be like
7 fakes, knockoffs of Fortnite. And MUWS stands for mobile
8 unwanted software, which is essentially malware.

9 **Q.** Was the purpose of the Fortnite Task Force to stop the
10 Fortnite launch?

11 **A.** It was not.

12 **Q.** Was the purpose of the task force to interfere with the
13 Fortnite launch?

14 **A.** No, it was not.

15 **Q.** Did the task force efforts help the Fortnite launch?

16 **A.** I believe it helped protect users.

17 **Q.** Now, the document we're looking at, I think you said it
18 had entries for various internal meetings. Would the earliest
19 meeting in time appear at the start or the end of the document?

20 **A.** At the end.

21 **Q.** All right. Let's turn to page 19.

22 **A.** Okay.

23 **Q.** Is the entry at the bottom the earliest meeting recorded
24 in this document?

25 **A.** Yes.

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1 Q. Who were the attendees?

2 A. Attendees Dave K, that's me; Jason, Sebastian, Jenny,
3 William.

4 Q. Were all these attendees members of the Android security
5 team?

6 A. Yes, they are -- they were at the time.

7 Q. All right. Let's go to page 16 now, and I think counsel
8 was showing you an entry there.

9 Now, in the middle of page 16, these are notes from
10 another meeting; right?

11 A. Yes.

12 Q. And counsel, I believe, showed you this meeting in his
13 examination; right?

14 A. Yes.

15 Q. Now, some of these attendees are not part of the Android
16 security team; is that right?

17 A. Correct.

18 Q. So why were attendees who are not part of the Android
19 security team meeting with you about a security issue?

20 A. Well, they were all part of the overall response. So you
21 had -- obviously we had lawyers there to provide legal advice.
22 Jamie was our primary contact. So communication to Epic
23 happened through him.

24 Q. What were you responding to?

25 A. Well, in this particular meeting we were responding to the

1 vulnerability that we discussed earlier.

2 Q. Can you tell the jury, what is a vulnerability?

3 A. A vulnerability is a flaw in software that would put the
4 user at risk by enabling attackers to exploit the user in some
5 way.

6 Q. Now, one of the attendees of this meeting was Colin Smith;
7 right?

8 A. Correct.

9 Q. What was Colin Smith's role in the company?

10 A. He was leading our public relations at the time.

11 Q. Why were you meeting with someone in public relations in
12 connection with a security issue?

13 A. With any security incident response team, public relations
14 is an important part of that response team, managing the
15 communications.

16 Q. Why?

17 A. There are oftentimes with vulnerabilities and other kinds
18 of incidents where you must communicate to the public and you
19 must interact with members of the press, et cetera.

20 Q. So we were talking earlier about this vulnerability, and
21 these meeting notes reflect that vulnerability; right?

22 A. Yes.

23 Q. In fact, the first bullet says (as read):

24 "Fortnite's disk strategy has created a
25 vulnerability."

1 Do you see that?

2 **A.** Yes.

3 **Q.** What was the specific vulnerability in Epic's Fortnite
4 installer?

5 **A.** So we mentioned earlier the Man-in-the-Disk vulnerability.
6 What happened there is the installer would download the app,
7 say Fortnite, and store it in external storage instead of the
8 private storage of the installer itself. And because it was
9 installed in this external storage, it means it was available
10 to any other application on the device to actually overwrite or
11 tamper with the application.

12 And so if there was malware on the device, it could
13 literally change the Fortnite application entirely, including
14 replacing it with malware. So that was a significant
15 vulnerability.

16 **Q.** If Google had not found this vulnerability, could users
17 have been harmed?

18 **A.** It would have added risk to users, yes.

19 **Q.** How?

20 **A.** Well, we saw lots of examples of malware authors trying to
21 exploit the launch of Fortnite; and if this vulnerability
22 became known by an attacker, then they could use this
23 vulnerability to do damage to the user.

24 **Q.** After Google discovered the vulnerability, did it
25 immediately tell the public?

1 **A.** We did not immediately tell the public.

2 **Q.** Why not?

3 **A.** We followed a responsible disclosure process, which is
4 what security research teams do.

5 **Q.** So what did you do as part of that process?

6 **A.** We -- once we understood the vulnerability, we
7 communicated it to the developer, in this case Epic, and
8 Samsung was involved as well.

9 **Q.** And after you communicated the vulnerability to Epic, did
10 Epic fix the vulnerability?

11 **A.** Epic did fix the vulnerability.

12 **Q.** And once Epic fixed the vulnerability, did Google disclose
13 the vulnerability to the public?

14 **A.** We disclosed it after the vulnerability was fixed, yes.

15 **Q.** Why?

16 **A.** It is common in security research teams to
17 publish/disclose vulnerability information after the
18 vulnerability is fixed. There's a number of reasons for that.
19 We want to inform the user. The user may take action to help
20 protect themselves. We inform the research community. They
21 may also learn from it and actually contribute to the research,
22 and just generally make the world aware so that they can stay
23 protected.

24 **Q.** Now, Epic's lawyer asked you earlier about whether
25 disclosing a vulnerability after 90 days is industry standard.

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1 Do you remember that?

2 **A.** Yes.

3 **Q.** Can you explain this industry standard?

4 **A.** Yes. The reason why security teams often use -- 90 days
5 is not universal, but it's common. The reason why security
6 teams have a 90-day deadline is to encourage, and some may say
7 pressure, the developer to fix that bug in a reasonable time
8 frame.

9 **Q.** And did you provide this context to Epic's lawyer in your
10 deposition?

11 **A.** I attempted to, yes.

12 **MR. OLASA:** Your Honor, I'd like to show 346 in
13 Volume 2, 11 to 23.

14 **THE COURT:** You want what?

15 **MR. OLASA:** Rehabilitation, Your Honor.

16 **THE COURT:** You want to do what?

17 **MR. OLASA:** I'd like to show the jury 346, 11 to 23,
18 in Tab 2 as rehabilitation.

19 **THE COURT:** No. Denied. Let's not ask that again.
20 Okay? Including that type of question.

21 **BY MR. OLASA:**

22 **Q.** And what about the 90-day versus 15-day issue you were
23 discussing with Epic's counsel? Is 15 days a standard in some
24 instances?

25 **A.** It's a standard for patching apps that have some sort of

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1 flaw of malware.

2 **Q.** And ultimately in this case did Google select 90 days or
3 15 days?

4 **A.** We selected 90 days for the time to fix.

5 **Q.** And once Epic fixed the vulnerability under the standard
6 procedure, was Google then free to disclose the vulnerability?

7 **A.** Yes. It is common for security teams to disclose a
8 vulnerability after it has been patched.

9 **Q.** All right. I'd like to turn to a different topic.

10 Mr. Kleidermacher, does Android use security and privacy
11 as one way to attract and retain users?

12 **A.** Yes.

13 **Q.** And does Android compete with Apple's IOS operating system
14 on security and privacy features?

15 **A.** Yes, we do.

16 **Q.** And as part of your work, do you inform yourself about
17 Apple's security and privacy efforts on its IOS operating
18 system?

19 **A.** Yes.

20 **Q.** And do you aim to make sure that Android security is as
21 good or better than the security of Apple's IOS?

22 **A.** Yes.

23 **Q.** Why is that your goal?

24 **A.** Well, we want -- first of all, we want to protect users as
25 best as we can; and if we make the cost to exploit users

1 higher, then we will move the attackers onto a different
2 platform, like our competitors' platform.

3 In addition, we also want to have a good reputation for
4 security because security and privacy is a purchasing factor
5 for consumers, and that's important for the product.

6 Q. Does Apple's IOS allowed sideloading?

7 A. It does not have a consumer flow for sideloading.

8 Q. So can a consumer get apps directly from the Internet on
9 an iPhone?

10 A. There is no supported method of doing that.

11 Q. And can consumers get apps from an alternative app store
12 on an iPhone?

13 A. They cannot.

14 Q. Is Android different in that respect?

15 A. Android is different.

16 Q. How?

17 A. Android from the beginning was designed to enable an open
18 ecosystem of app source, including third-party app sources as
19 well as directly downloading from the Internet.

20 Q. Does sideloading affect how Android competes with IOS on
21 the dimension of security?

22 A. Very much so.

23 Q. How?

24 A. Well, it makes our job much more difficult.

25 Q. Why?

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1 **A.** When you download -- when you are downloading apps from
2 the Internet, you have -- you don't have the same signals that
3 you would have when downloading from an app store. So it's
4 inherently more risky, and it makes my and my team's job much
5 more difficult.

6 **Q.** As part of your job, do you stay informed on Apple's
7 public statements about Android security?

8 **A.** Yes.

9 **Q.** Why?

10 **A.** Again, it's important to understand how we're competing
11 with them and how they're competing with us so we can do the
12 best we can.

13 **Q.** Have you ever seen Apple use sideloading as a way to
14 attack or diminish Android's security reputation?

15 **A.** Yes.

16 **Q.** And do those attacks affect your work?

17 **A.** Yes.

18 **Q.** Why?

19 **A.** Well, if they are attacking a weakness in the platform,
20 then that can cause a loss of trust, which, again, is a problem
21 with competition, with us competing against Apple on security.

22 **Q.** Could you turn to Exhibit 5945 in the binder we handed
23 you?

24 **A.** Yes.

25 **Q.** Have you seen this document before?

1 **A.** I have.

2 **Q.** What is this document?

3 **A.** The Android feature audit document is a marketing document
4 that is performing a competitive analysis between IOS and
5 Android.

6 **Q.** Was this document presented to you in the course of your
7 work at Google?

8 **A.** Yes.

9 **Q.** Do you know why this document was presented to you?

10 **A.** The marketing team wanted to ensure that we had a rigorous
11 analysis of differences to help inform our work.

12 **Q.** Does page 46 of this document discuss the marketing team's
13 assessment of Android's security and privacy protections?

14 **A.** Did you say page 46?

15 **Q.** Yes.

16 **A.** Yes.

17 **Q.** And did you rely on page 46 of this document in connection
18 with your work on Android security?

19 **A.** Yes. This is a summary of trust privacy and security, so,
20 yes.

21 **MR. OLASA:** Your Honor, I'd move to admit
22 Exhibit 5945.

23 **MR. EVEN:** Your Honor, I object on hearsay and
24 foundation. It's a marketing document. It's not clear to me
25 how the witness --

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1 **THE COURT:** All right. Why don't you lay a little bit
2 more of a foundation.

3 **MR. OLASA:** Sure.

4 **BY MR. OLASA:**

5 **Q.** Mr. Kleidermacher, as part of your work on Android
6 security, do you inform yourself on how marketing or consumer
7 perception of Android security affects competition with IOS?

8 **A.** Yes, we do, and it's one of the things we track and
9 compare ourselves against.

10 **Q.** And is this document part of that effort?

11 **A.** Yes.

12 **Q.** And was this a document you received in the ordinary
13 course of business at Google?

14 **A.** Yes.

15 **Q.** And did you rely on page 46 to inform your work in
16 competing with Apple's IOS on privacy and security?

17 **A.** Yes.

18 **MR. OLASA:** Your Honor, I move again to admit
19 Exhibit 5945, and I'd be happy to limit it to the --

20 **THE COURT:** I'll admit that one page. Go ahead. Just
21 page 46.

22 (Trial Exhibit 5945, page 46, received in evidence.)

23 **BY MR. OLASA:**

24 **Q.** All right. Mr. Kleidermacher, could you turn to page 46
25 of the document?

1 **A.** (Witness examines document.) Okay.

2 **Q.** Does this page report the marketing team's assessment of
3 Android's privacy and security?

4 **A.** Yes.

5 **Q.** And do you see the bar on the right that says "Privacy and
6 Security"?

7 **A.** Yes.

8 **Q.** What was your understanding of the meaning of this bar?

9 **A.** The marketing team had performed a sort of measurement of
10 the relative capabilities in privacy and security between the
11 two platforms. They had some form of scoring rubric, and the
12 result of their scoring shows that IOS has an 18 percent
13 advantage.

14 **Q.** And there are a number of bullets to the left of that
15 chart. Do you see that?

16 **A.** Yes.

17 **Q.** Can you take a look at the second bullet?

18 **A.** Okay.

19 **Q.** That bullet says (as read):

20 "The ability to install unknown apps in Android is a
21 major security vulnerability."

22 Do you see that?

23 **A.** Yes.

24 **Q.** What was your understanding of that bullet?

25 **A.** Well, it's stating what we've been talking about already,

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1 which is the sideloading from the Internet adds a lot more risk
2 and is viewed as a major security vulnerability.

3 **Q.** You can put that document aside, Mr. Kleidermacher.

4 Would removing Android's sideloading consent screens while
5 keeping the ability to sideload affect Android's competition
6 with Apple on security?

7 **A.** Yes.

8 **Q.** How?

9 **A.** If we remove those consent screens, more users would be
10 harmed and that would hurt security for Android.

11 **Q.** We'll come back to the sideloading consent screens a
12 little later.

13 All right. Mr. Kleidermacher, let me back up and properly
14 introduce you to the jury.

15 I think I heard you say you joined Google in May 2017; is
16 that right?

17 **A.** Yes.

18 **Q.** Where did you work before that?

19 **A.** Before that I worked at BlackBerry.

20 **Q.** How long did you work there?

21 **A.** A little over two years.

22 **Q.** What was your job at BlackBerry?

23 **A.** I was the chief security officer responsible for security
24 of BlackBerry's products.

25 **Q.** And did BlackBerry make smartphones?

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1 A. That was one product that BlackBerry made, yes.

2 Q. Before your time at, BlackBerry, where did you work?

3 A. I worked for a company called Green Hill Software.

4 Q. What did Green Hills do?

5 A. Green Hill Software built secure operating systems that
6 are running in security-critical systems, such as medical
7 devices, connected cars, and airplanes.

8 Q. And did your job at Green Hills involve computer security?

9 A. It did, yes.

10 Q. So how long in total in your career have you worked on
11 computer security issues?

12 A. I've dedicated my entire career to it; over 30 years.

13 Q. Let's turn back to your time at Google.

14 What products and services at Google are you responsible
15 for?

16 A. I'm responsible -- I'm the engineering VP for Android,
17 Google Play, and the Made by Google Products security And
18 privacy.

19 Q. All right. We talked a little bit about malware earlier.
20 Have you also heard the term "potentially harmful apps" or
21 "PHAs"?

22 A. Yes.

23 Q. What does that term mean?

24 A. That's a term that our team invented. It is synonymous --
25 practically synonymous with malware.

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1 Q. And is part of your job to inform yourself about the risks
2 of malware to Android devices and users?

3 A. Yes.

4 Q. And can PHAs or malware come from well-known developers?

5 A. It can come from well-known developers.

6 Q. We heard the term spyware?

7 A. Yes.

8 Q. What is spyware?

9 A. Spyware is a type of malware that is attempting to collect
10 sensitive information from the user in a way -- without the
11 users knowledge or authorization.

12 Q. And who makes malware?

13 A. A number of different entities make malware. It can range
14 from a single teenager who's just trying to make a point, to
15 organized criminal gangs, all the way up to state-sponsored
16 attackers.

17 Q. And how does malware get onto a user's device,
18 Mr. Kleidermacher?

19 A. The typical way that malware gets onto devices is from the
20 user installing it.

21 Q. Have you heard the term "social engineering"?

22 A. Yes.

23 Q. What is social engineering in the context of malware?

24 A. Social engineering is when an attacker is attempting to
25 trick the user to do something to reduce or harm their own

1 security, such as installing malware.

2 Q. As part of your job, do you keep track of significant
3 malware attacks on Android?

4 A. Yes.

5 Q. Can you give the jury a recent example of a significant
6 malware attack on Android?

7 A. Sure. A recent campaign -- malware campaign on Android is
8 something called FluBot. You can Google it. FluBot malware
9 campaign was a massive malware attack that was performed
10 through the sideloading of malware onto Android devices.

11 Q. As part of your work on Android security, did you inform
12 yourself on how FluBot spread and infected devices?

13 A. Yes.

14 Q. Have you given presentations on FluBot?

15 A. I have.

16 Q. How did FluBot get installed on a particular user's
17 device?

18 A. Well, the initial infection of FluBot was through social
19 engineering. So the attackers sent SOS messages with innocuous
20 looking messages, like "There's a package you haven't received
21 and I can help you fix that. Just install this app." And so
22 the user would then install the app, and that is how the
23 malware initially got onto the devices.

24 Q. Would a user know that they were installing something
25 called FluBot?

1 **A.** No. They thought they were just being helped by this
2 entity.

3 **Q.** And what would FluBot do once it was on a particular
4 user's device?

5 **A.** So FluBot would use additional social engineering to
6 convince the user, trick the user, to giving the malware
7 application even more privileges, such as accessibility
8 permissions, which is one of the most powerful permissions on
9 the operating system.

10 **Q.** And how widespread was FluBot?

11 **A.** FluBot -- hundreds of millions of devices were attacked by
12 FluBot.

13 **Q.** And what were the consequences to an Android user whose
14 device was infected by FluBot?

15 **A.** So the purpose of the FluBot malware was to steal banking
16 credentials. So once the malware obtained these extra
17 permissions, it would then have the ability to go into your
18 financial information through your e-mail, through any data on
19 the phone, and then completely wipe you out, wipe your finances
20 out from the bank, and then worm its way onto other devices.

21 **Q.** Did Android sideloading consent screens reduce the harm of
22 FluBot?

23 **A.** Yes.

24 **Q.** Does Google try to keep Android users safe from malware
25 like FluBot?

1 **A.** Yes, we do.

2 **Q.** And do you supervise those efforts?

3 **A.** Yes.

4 **Q.** How many people on your team work on Android security
5 issues?

6 **A.** My team has approximately 400 people.

7 **Q.** Do other teams at Google also contribute to Android
8 security?

9 **A.** Yes.

10 **Q.** Does Google have a trust and safety team that contributes
11 to Android security?

12 **A.** Yes. They're our sister team.

13 **Q.** How many people on the trust and safety work on Android
14 security?

15 **A.** Our trust and safety team does a lot of our reviews, and
16 they have a -- thousands of people.

17 **Q.** All right. So I want to talk about the Google Play Store,
18 and I want to walk through the process of how an app gets onto
19 the Google Play Store.

20 First, does a developer have to submit its app to Google
21 before it can get on the Google Play Store?

22 **A.** Yes.

23 **Q.** And once the app is submitted, does Google review the app
24 before putting it on the store?

25 **A.** Yes.

1 Q. At a high level, what are the components of this review?

2 A. So there is -- for a new app there's a human review to
3 examine it for compliance to a number of policies, such as
4 content policies. If the app is using an icon similar to a
5 different brand, then we'll look to see if it's impersonating,
6 as one example.

7 Then there is concurrent machine-base review. So we have
8 built a sophisticated infrastructure that will examine the
9 application as well as the developer signals looking for
10 signals of risk. And if there is a risk that is identified in
11 the application, then it will go to further human review; and
12 those further human reviewers will then -- will often then be
13 needed to actually confirm certain types of policy violations,
14 such as a malware violation.

15 Q. All right. I want to talk briefly about the machine
16 review.

17 Does Google's machine review examine the code of the
18 actual application?

19 A. It does, yes.

20 Q. And does Google's machine review actually run an app to
21 see how it behaves?

22 A. Yes. We call that dynamic analysis.

23 Q. How long did it take Google to develop its machine review
24 technology?

25 A. All of that infrastructure, static dynamic analysis, and

1 all the AI that we built into the system we have been
2 developing for many years.

3 **Q.** And does this review technology include Google's
4 intellectual property?

5 **A.** Yes, it does.

6 **Q.** And do you review this technology to be a competitive
7 advantage of the Google Play Store?

8 **A.** Yes.

9 **Q.** I want to talk about human review briefly.

10 Why does Google Play's app review process include human
11 review?

12 **A.** There are aspects of policy enforcement that require human
13 judgment. The example I gave earlier where you might have an
14 icon that is impersonating another icon, sometimes there's gray
15 area and the human needs to have judgment there.

16 And in the case of behavior, like malware behavior, the AI
17 algorithms will often output a risk score, like a 70 percent
18 probability of malware, and we obviously suspend the app based
19 on a 70 percent probability so humans are used then to reverse
20 engineer and actually understand the capabilities of the
21 application. So to confirm the malware.

22 **Q.** All right. Turning back to the overall process, if no
23 malware is identified at the end of this review process, what
24 happens?

25 **A.** If there are no signals of risk, then the app will be

1 published.

2 Q. And does Google Play also review all updates to apps?

3 A. Yes.

4 Q. Why does Google Play review an update to an app?

5 A. Well, when -- it is not uncommon for a malware author to
6 first publish a clean version of the app and then subsequently
7 publish an update that would then be malicious, so it is
8 important to review every app.

9 Q. Do all apps and app updates go through Google Play's
10 review process?

11 A. All apps, whether the initial publication or the update,
12 all have to be reviewed.

13 Q. And what about human review? Do all apps and all app
14 updates go through the human review component of Google Play?

15 A. Not all updates.

16 Q. How does Google determine whether to do human review of an
17 app?

18 A. So as I mentioned earlier, the AI systems, when they
19 detect a reasonably high probability of risk, then they -- that
20 will flag the app for then further human review to confirm it.

21 Q. Is an app or app update ever published on the Google Play
22 Store before this review process is complete?

23 A. Not that I'm aware of.

24 Q. Does this review process we were discussing help Google
25 catch malware before it is published on the store?

1 **A.** Yes.

2 **Q.** Does this review process help keep users safe?

3 **A.** Yes.

4 **Q.** Does this review process detect all malware?

5 **A.** No. It isn't possible to detect all malware.

6 **Q.** But does malware make it onto the Google Play Store?

7 **A.** Occasionally, yes.

8 **Q.** And does Google try and remove that malware?

9 **A.** We try to remove it as fast as we can, yes.

10 **Q.** Now, counsel asked you in his examination about something
11 called App Defense Alliance reviews. Do you recall that?

12 **A.** I do.

13 **Q.** Are those reviews in any way a substitute for Google Play
14 App Store review?

15 **A.** It is not a substitute.

16 **Q.** Why not?

17 **A.** The App Defense Alliance is basically certifying against a
18 minimum baseline of security requirements. These are pretty --
19 pretty basic things, like are you encrypting data. So the
20 reviews that we perform are far, far more comprehensive than
21 that, including the malware reviews as one example.

22 **Q.** Counsel also asked you some questions about a technology
23 called Google Play Protect. Do you recall that?

24 **A.** Yes.

25 **Q.** And counsel asked you questions about how that technology

1 reviews apps that are outside Play. Do you recall that?

2 **A.** Yes.

3 **Q.** Does Google Play Protect provide the same level of
4 protection for apps downloaded outside the Play Store as
5 compared to apps downloaded on the Play Store?

6 **A.** It does not.

7 **Q.** Why?

8 **A.** So on the Play Store, Google Play Protect has signals
9 about the behavior of the application, but it also has a lot of
10 signals about the developer and other signals, like even
11 payment signals, from interacting with the store. Those
12 signals actually contribute approximately two-thirds of the
13 findings of malware. So it's a really important part.

14 And when we download an app from the Internet, all we have
15 is the app and we do not have that other information to help
16 the system be smarter about malware detection.

17 **Q.** And has Google Play Protect reviewed all apps that are
18 outside the Play Store?

19 **A.** No.

20 **Q.** As the head of Android security, do you think it would be
21 feasible for Google to provide the same level of review to apps
22 outside the Play Store as it does to apps inside the
23 Play Store?

24 **A.** We can't make the Internet safe.

25 **Q.** Are you aware of any major consumer operating system in

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1 which the creator of the operating system is responsible for
2 reviewing all the apps on the operating system?

3 A. Yes.

4 Q. Which one?

5 A. That would be IOS.

6 Q. And how does Apple achieve that?

7 A. Well, they have the walled garden where the only place you
8 can get apps is from the IOS app store.

9 Q. All right. So we talked about sideloading earlier. Can
10 you remind the jury, what is sideloading?

11 A. Sideloading is the downloading of an application from the
12 Internet.

13 Q. And does Android show any consent screens if a user
14 attempts to sideload?

15 A. Yes.

16 Q. All right. I'd like to put up a demonstrative.

17 Can we go to Demonstrative 1?

18 Are these the screens -- these consent screens you
19 described, Mr. Kleidermacher?

20 A. Yes.

21 Q. Why does Android show these consent screens when a user
22 attempts to sideload?

23 A. The operating system wants to have an affirmative consent
24 from the user that they understand the risks they're
25 undertaking.

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1 Q. All right. Let's go through these screens.

2 The first screen, what is its purpose?

3 A. This first screen is -- is a --

4 MR. OLASA: Ms. Nicols, can we zoom in on the first
5 screen?

6 THE WITNESS: Yes, thank you.

7 Yeah, so this screen is the operating system asking the
8 user to affirm the use of this source of applications.

9 BY MR. OLASA:

10 Q. And this screen says that (as read):

11 "Your phone isn't currently allowed to install
12 unknown apps from this source. You can change that in
13 settings."

14 What is an unknown app?

15 A. An unknown app is just an app that comes from an unknown
16 source.

17 Q. And what is a source?

18 A. A source -- any -- the way Android works, any application
19 can be a source of another app. Applications by downloading,
20 they're becoming a downloader of other applications.

21 Q. In this example, what is the source?

22 A. In this example, the source is Chrome, the browser.

23 Q. And if you click on the settings button in the first
24 screen, what happens?

25 A. When you click on settings, you go to the next screen in

1 the middle, which takes you to the toggle which enables the
2 source.

3 **MR. OLASA:** All right. Ms. Nicols, can we zoom into
4 the second screen?

5 **BY MR. OLASA:**

6 **Q.** All right. And if the user gets to the second screen and
7 toggles that toggle, what happens?

8 **A.** That means that the operating system now knows that the
9 user has confirmed that this source can be -- can install apps.

10 **Q.** And what is the purpose of this screen?

11 **A.** The privilege to install apps is one of the most powerful
12 and dangerous permissions on the operating system, and so we
13 want to make sure that the user is willing to trust that
14 source.

15 **Q.** Would eliminating these first two screens affect user
16 security?

17 **A.** Yes.

18 **Q.** All right. So let's talk about the third screen we see
19 there. What's the purpose of that third screen?

20 **A.** This screen is the operating system affirming the -- an
21 install of an app.

22 **Q.** And why does the operating system show this third screen?

23 **A.** Well, if the -- if an app install wasn't affirmed or
24 consented by the user, then the installer or the app source
25 could just install any number of apps in the background, and

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1 that is exactly what hostile downloaders or malware can do.

2 The user should always confirm each install.

3 **MR. OLASA:** Mr. Nicols, can you take out the
4 highlighting?

5 **BY MR. OLASA:**

6 **Q.** So let's say the browser, in this case the browser, had
7 already received permission to install apps and the user had
8 already gone through screens one and two on some previous
9 occasion. Are you with me?

10 **A.** Yes.

11 **Q.** In that case, what would happen if the user tried to
12 install a new app from the browser?

13 **A.** So if another app was installed through the browser, then
14 the user would only see the third screen.

15 **Q.** And this third screen --

16 **MR. OLASA:** Mr. Nicols, can we go on to the next
17 demonstrative?

18 **BY MR. OLASA:**

19 **Q.** Is this the screen the operating would show if the browser
20 had already received permission to install apps?

21 **A.** Yes.

22 **Q.** Now, if a user downloads an app from a web browser, will
23 the user sometimes see an additional screen?

24 **A.** Can you repeat the question?

25 **Q.** Sure.

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1 Do web browsers also provide warnings on some occasions to
2 the user?

3 **A.** Yes.

4 **MR. OLASA:** All right. Can we look at the next
5 demonstrative, Ms. Nicols?

6 **BY MR. OLASA:**

7 **Q.** Are these the examples of web browser warnings we were
8 talking about?

9 **A.** Yes.

10 **Q.** What's the example on the left?

11 **A.** The example on the left is the Chrome browser and the
12 message that the Chrome browser displays to the user when a
13 file is downloaded.

14 **Q.** And what's the example on the right?

15 **A.** The example on the right is the Edge browser, Microsoft
16 Edge browser, and the warning that it shows when downloading an
17 app from the Internet.

18 **Q.** Are these screens shown by the Android operating system?

19 **A.** No.

20 **Q.** So why is the user seeing these screens?

21 **A.** Because the browsers are -- decided to provide that
22 warning.

23 **Q.** If the user is trying to sideload from a nonbrowser app,
24 like a file manager, would the user see these messages?

25 **A.** It would be -- the file manager in that case would be

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1 responsible for any user experience there.

2 **Q.** Mr. Kleidermacher, have you prepared videos of the
3 sideloading process to help explain this process to the jury?

4 **A.** Yes.

5 **Q.** And did you make these videos?

6 **A.** I did.

7 **Q.** And are they representative of the sideloading process on
8 a Pixel device?

9 **A.** Yes.

10 **Q.** What operating system was this device running?

11 **A.** It's running our latest operating system, Android 14.

12 **Q.** All right. Let's watch the first video.

13 (Video was played but not reported.)

14 **BY MR. OLASA:**

15 **Q.** Mr. Kleidermacher, is this video representative of the
16 flow for installing an app directly from a website?

17 **A.** It's the flow for installing the app store.

18 **Q.** And if the app that was installed was not an app store but
19 a game, could the user then just go ahead and play the game?

20 **A.** Yes. At that point they could play the game.

21 **Q.** All right. Let's watch the second video.

22 (Video was played but not reported.)

23 **BY MR. OLASA:**

24 **Q.** What are we watching right now, Mr. Kleidermacher?

25 **A.** This is the installation of the Fortnite app.

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1 Q. And this downloading screen, is that something that the
2 operating system does?

3 A. No. That is coming from Fortnite or Epic.

4 Q. Is Fortnite a big game?

5 A. It is a game.

6 Q. Mr. Kleidermacher, why did we see the consent screens
7 again in this video?

8 A. In this video, the Epic Games installer had not been --
9 had not been authorized by the user yet, so it was the first
10 attempt to download a game invokes the authorization for the
11 installer.

12 Q. Let's watch the final video. I promise.

13 (Video was played but not reported.)

14 **BY MR. OLASA:**

15 Q. What did the screens show, Mr. Kleidermacher?

16 A. This shows the installation of another app from the same
17 app store.

18 Q. And this time did we see the consent screens to enable a
19 new source?

20 A. No. Because the user has already confirmed the use of the
21 app store, so any subsequent app installation will only have
22 the single screen.

23 Q. Now, Mr. Kleidermacher, are these screens, the screens we
24 were looking at, designed to present users from sideloading?

25 A. No.

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1 **Q.** What is the purpose of these screens?

2 **A.** The operating system wants to confirm the user's intent to
3 install the app.

4 **Q.** How would removing these consent screens affect your
5 ability to keep Android devices secure?

6 **A.** Removing these consent screens would make users less safe,
7 and it would make my job and my team's job much harder.

8 **Q.** Why?

9 **A.** Because the user doesn't have a moment to reflect on the
10 risk that they're taking and make an informed decision. These
11 installations would just happen without the user's knowledge in
12 some cases, and that would put them at increased risk.

13 **Q.** As a technological matter, could Google remove the ability
14 to sideload an Android?

15 **A.** As a technical matter, we could remove that capability.

16 **Q.** Did Google have to go out of its way to allow sideloading
17 on Android?

18 **A.** That was part of the initial design, yes.

19 **MR. OLASA:** Your Honor, I'd like to move the videos we
20 just watch into evidence for the jury's reference.

21 **MR. EVEN:** No objection.

22 **THE COURT:** Okay. They're admitted.

23 **THE CLERK:** Is there an exhibit number?

24 **MR. OLASA:** We'll get one right after this.

25 (Trial Exhibits 9051, 9052, and 9053 received in

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1 evidence.)

2 **BY MR. OLASA:**

3 **Q.** Now, Mr. Kleidermacher, you told the jury earlier that you
4 worked at BlackBerry; correct?

5 **A.** Correct.

6 **Q.** And as BlackBerry's chief security officer, was it your
7 job to keep BlackBerry devices safe for users?

8 **A.** Yes.

9 **Q.** What operating system did BlackBerry smartphones use?

10 **A.** They used multiple operating systems. In the earlier
11 days, there was a proprietary operating system called
12 BlackBerry OS; and then later on when I joined the company in
13 2015, BlackBerry made devices based on Android.

14 **Q.** When BlackBerry used its own operating system, did that
15 operating system support sideloading?

16 **A.** It did not.

17 **Q.** And when BlackBerry switched to the Android operating
18 system, were you BlackBerry's chief security officer?

19 **A.** Yes.

20 **Q.** And when you were BlackBerry's security officer, would you
21 have shipped an Android BlackBerry device that allowed
22 sideloading but didn't have sideloading warnings?

23 **A.** I would not.

24 **Q.** Why not?

25 **A.** Because, again, the consent is an important part of

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1 security, and that would have reduced the security of the
2 product.

3 **MR. OLASA:** All right. Pass the witness, Your Honor.

4 **THE COURT:** Okay. Any brief recross?

5 **MR. EVEN:** Thank you, Your Honor.

6 **REDIRECT EXAMINATION**

7 **BY MR. EVEN:**

8 **Q.** So, Mr. Kleidermacher, I actually would like to begin with
9 the videos.

10 So the videos were pre-prepared; correct?

11 **A.** I just made them yesterday.

12 **Q.** You just made them before today?

13 **A.** Yes.

14 **Q.** And on them you never stopped to, like, actually read any
15 of the warnings; correct?

16 **A.** It was a recording of the -- it was a screen recording.

17 **Q.** It was a very quick screen recording where you just
18 clicked through; correct?

19 **A.** I was -- I literally just pressed record and recorded
20 exactly what I did.

21 **Q.** All right. So let's maybe read them so we understand what
22 we're talking about.

23 If we can -- I'm going to need your help, please, to bring
24 up the first security warning first. Blow up the one that says
25 "For your security."

1 Okay. So this says (as read):

2 "For your security, your phone currently isn't
3 allowed to install unknown apps from this source."

4 Correct?

5 **A.** Correct.

6 **Q.** And so this tells the user downloading from here is less
7 safe; correct?

8 **A.** It is telling the user that you should think about what
9 you're doing before you proceed.

10 **Q.** And the "here" in this particular one is Chrome, the
11 entire worldwide web; correct?

12 **A.** This source is Chrome.

13 **Q.** And this setting is for Chrome. It's not going to say
14 adobe.com versus some other website; correct? It's just
15 Chrome.

16 **A.** It is an app -- it is a source of installs of apps,
17 Chrome.

18 **Q.** I understand.

19 **A.** Websites are not --

20 **Q.** And the source --

21 **A.** -- sources of installs.

22 **Q.** Sorry. I didn't mean to talk over you.

23 The source that we're talking about here is Chrome at
24 large, not any particular website; correct?

25 **A.** It is the browser.

1 Q. It is the browser.

2 Because you have not built any system to try and assess
3 the security of any particular website; correct?

4 A. Correct.

5 Q. Now let's go to the next screen.

6 This screen says (as read):

7 "Your phone and personal data are more vulnerable to
8 attack by unknown apps. By installing apps from this
9 source, you agreed you are responsible for any damage to
10 your phone or loss of data that may result from their
11 use."

12 Correct?

13 A. Yeah, that's what it says, yes.

14 Q. And that is intended to convey and does convey to the user
15 that by installing something from the web, they are waiving
16 some kind of warranty; right?

17 A. The operating system has a generic message for approving
18 an installation source, and that's what it is.

19 Q. Sir, the generic message suggests that you are going to be
20 responsible for the damage from this download; correct?

21 A. Sources of apps are a very powerful and dangerous
22 permission.

23 Q. You're going to be responsible -- you, the user, are going
24 to be responsible for damage to your phone or loss of data;
25 correct?

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1 **A.** That's what the words say.

2 **Q.** Okay. Now, when I download S-ON, for instance, from the
3 Play Store, I'm not going to get any warning; correct?

4 **A.** You will not see this warning.

5 **Q.** But me as the user, I'm still going to be fully
6 responsible to any damage to my phone or loss of data; right?
7 Google is not going to make me whole?

8 **A.** I don't know -- I don't know about that.

9 **Q.** There's no warranty in the Play Store; correct? This
10 suggests that I'm waiving a warranty. That's just false;
11 right?

12 **A.** I actually don't know.

13 **Q.** You don't know that there isn't a warranty by the
14 Play Store saying "Everything you download from here is so
15 safe, we'll give you a new phone and compensate you for the
16 loss of data"?

17 **A.** I'm not aware of the warranties in the product.

18 **Q.** Okay. You talked a little bit about Exhibit 5945. Do you
19 see that?

20 **TECH PERSONNEL:** Ms. Clark, can you switch it over?

21 **BY MR. EVEN:**

22 **Q.** And 5945 is a marketing slide deck; correct?

23 **A.** Yes.

24 **Q.** And the input here is not from you. It's from the
25 marketing department; correct?

1 A. Yes.

2 Q. They wrote it?

3 A. Correct.

4 Q. Okay. So when somebody wrote that "The ability to install
5 unknown apps in Android is a major security vulnerability,"
6 that's the marketing department writing that?

7 A. That is correct.

8 Q. Let me go back for a second to an exhibit we talked about,
9 which is 8576, and that is the letter that you sent to Epic.

10 And on the second page, do you see that there's a
11 reference at the very end to a recent blog from Checkpoint. Do
12 you see that?

13 A. Yes.

14 Q. And Checkpoint is a security company; correct?

15 A. Yes.

16 Q. A well-known security company; correct?

17 A. I know them.

18 Q. Okay. And you were talking a little bit about
19 Man-in-the-Disk and how serious of a threat that is; right?

20 A. Yes.

21 Q. And Man-in-the-Disk, just so we understand, I think you
22 said that actually, is the risk there is that a phone that
23 already has malware, that malware can use the vulnerability to
24 install a second malware on top of it; right?

25 A. Yes.

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1 **Q.** And if you can turn to Exhibit 8009 in your binder.

2 **A.** (Witness examines document.) Yes, okay.

3 **Q.** Okay. You see that that is, in fact, the Checkpoint
4 release from August 12, 2018, that you referenced?

5 **A.** Yes.

6 **MR. EVEN:** I'd like to admit 8009.

7 **MR. OLASA:** No objection, Your Honor.

8 **THE COURT:** It's admitted.

9 (Trial Exhibit 8009 received in evidence.)

10 **BY MR. EVEN:**

11 **Q.** So let's go and see what Checkpoint said about this.

12 This is the exact same Man-in-the-Disk vulnerability;
13 correct?

14 **A.** I believe so.

15 **Q.** And this was discovered and published on August 12, 2018,
16 before Mr. Cunningham found the vulnerability in Epic's
17 launcher; correct?

18 **A.** I believe that's before. I'm not 100 percent sure.

19 **Q.** It's a day before he at least reported it to you.

20 **A.** Okay. Okay.

21 **Q.** All right. So let's see what Checkpoint said about this
22 vulnerability.

23 Let's first go to page 9.

24 And on page 9 at the bottom it says (as read):

25 "From experience it would seem that mere guidelines

1 are not enough for OS vendors to exonerate themselves of
2 all responsibility for what is designed by app
3 developers."

4 Did I read that correctly?

5 **A.** I'm sorry, what page are you on?

6 **Q.** 9. It's on your screen, sir. It's probably easier.

7 **A.** Okay. I see it on the screen.

8 **Q.** And instead it says (as read):

9 "Securing the underlying OS is the only long-term
10 solution to protecting against this new attack surface
11 uncovered by our research."

12 Correct?

13 **A.** Yes.

14 **Q.** And the OS vendor is Google; right?

15 **A.** Yes.

16 **Q.** Okay. Let's go to page 6.

17 And on page 6 you see at the top Checkpoint reports that
18 it checked several other apps to see whether they find this
19 vulnerability in the field; correct?

20 **A.** Yes.

21 **Q.** And at least two of these, Google Translate and Google
22 Voice Typing, both had the same vulnerability; correct?

23 **A.** It wasn't the same exact vulnerability, but the same
24 family of attacks, Man-in-the-Disk.

25 **Q.** This is the same Man-in-the-Disk vulnerability, I think

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1 you said that already. And Google Voice Typing and
2 Google Translate both had that vulnerability; correct?

3 **A.** Yes. I think it's important to understand it's a
4 different actual --

5 **Q.** Sir, this is the vulnerability that Checkpoint is
6 reporting in --

7 **A.** Same class -- sorry.

8 **Q.** -- google's own apps; correct?

9 **A.** Yes.

10 **THE COURT:** Let's not interrupt each other.

11 **THE WITNESS:** Sorry about that.

12 **THE COURT:** Ask the question again. Let's start from
13 the top.

14 **BY MR. EVEN:**

15 **Q.** This is the vulnerability, the Man-in-the-Disk
16 vulnerability, as reported by Checkpoint, and they are
17 reporting that they found it in the field in two of Google's
18 own apps, Google Translate and Google Voice Typing; correct?

19 **A.** It was the same class of vulnerability.

20 **Q.** And they are reporting that they found it in two of
21 Google's own apps, Google Translate and Google Voice Typing;
22 correct?

23 **A.** Yes.

24 **Q.** And if you go to page 7, at the bottom you see that it
25 says (as read):

1 "Upon discovery of these application vulnerabilities,
2 we contacted Google."

3 Do you see that?

4 **A.** Yes.

5 **Q.** And jump to the next sentence.

6 It says (as read):

7 "A fix to the applications of Google was released
8 shortly after."

9 Right?

10 **A.** I see that.

11 **Q.** Now, Checkpoint follows the same 90-day industry standard;
12 correct?

13 **A.** I don't know what their disclosure policy is.

14 **Q.** Regardless of how long, fair to say that Google has known
15 about this vulnerability for quite some time from Checkpoint
16 because Checkpoint told them and Google managed to fix two of
17 its own apps; correct?

18 **A.** We knew it when -- we knew about this report when they
19 reported it to us, August.

20 **Q.** Prior to August 12, which is when they reported it to the
21 world; right? They are reporting that they told you and that
22 you fixed it?

23 **A.** Yes.

24 **Q.** So you must have known about it before; right?

25 **A.** Sorry. Could you express the question one more time?

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1 Q. Checkpoint told you 90, 60, however many days prior to
2 August 12 that this vulnerability is an issue; correct?

3 A. I don't know when they told us.

4 Q. But you know that it's sometime -- enough time for Google
5 to understand and release fixes --

6 A. Yes.

7 Q. -- prior to August 12; correct?

8 A. Yes.

9 Q. And you're not aware sitting here today that Google fixed
10 its guidelines to developers, such as Epic, to make the
11 pitfalls of this vulnerability clearer; correct?

12 A. Could you please repeat that?

13 Q. You sitting here today, you're not aware of Google
14 actually changing its guidelines to -- so that developers like
15 Epic understand that this vulnerability has been identified by
16 Checkpoint, Google knows about it, Google hasn't fixed the OS
17 yet, but developers should take care when they are designing
18 their own apps not to repeat the mistakes that were done in
19 Google Translate, for instance?

20 A. I really have lost your question. Maybe you can simplify
21 it.

22 Q. It's a pretty simple question.

23 Sitting here today, you do not know that Google released
24 any new guidelines to developers to say "Watch out. This
25 vulnerability has been reported to us by Checkpoint. You

1 should take the following five steps"?

2 **A.** You're asking if Google released guidelines subsequent to
3 this report?

4 **Q.** Subsequent to learning about the vulnerability from
5 Checkpoint.

6 **A.** I don't know.

7 **Q.** You're not aware of Google creating any task force about
8 Google Translate; correct?

9 **A.** No.

10 **Q.** You're not aware of any blog post about Google Translate?

11 **A.** No.

12 **Q.** You're not aware of Google tipping off any newspapers
13 about the vulnerability in Google's own apps; correct?

14 **A.** No.

15 **MR. EVEN:** No further questions, Your Honor.

16 **THE COURT:** Okay. The witness may step down.

17 (Witness excused.)

18 **THE COURT:** All right. That's it for today.

19 Now tomorrow, let's do 9:00 o'clock. The area around the
20 Asian Art Museum is going to be blocked off for a bit. So if
21 you're driving in, just be aware of that.

22 Okay. We'll go to 2:45 tomorrow. And we'll end today, as
23 we always do, with our affirmation that we're going to put
24 everything out of mind, not read anything, not hear anything,
25 not discuss anything, certainly not research anything, look

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1 anything up on the Internet, or anything else.

2 I'll see you tomorrow morning.

3 **THE CLERK:** All rise.

4 (Proceedings were heard out of the presence of the jury:)

5 **THE COURT:** We're all set?

6 **MR. POMERANTZ:** Your Honor, a couple of things, if I
7 may.

8 **THE COURT:** Yes.

9 **MR. POMERANTZ:** Your Honor had ordered us to lodge
10 some materials with you in connection with tomorrow's hearing.

11 **THE COURT:** Litigation holds, yes.

12 **MR. POMERANTZ:** Yes, Your Honor. And I have them in
13 this binder.

14 **THE COURT:** If you can hand them to Ms. Clark, please.
15 Thank you.

16 Anything else?

17 **MR. POMERANTZ:** Your Honor, we -- Mr. Bornstein has
18 asked for a copy of them. We obviously consider these to be
19 privileged, but we would take direction from Your Honor.

20 **THE COURT:** Well, I think -- yes. Let me -- I'll tell
21 you in the morning. Okay? Just I'll tell you in the morning.

22 Okay. Anything else?

23 **MR. POMERANTZ:** One other thing, Your Honor. There is
24 a motion that we have filed relating to the sealing of some
25 information related to Apple.

1 **THE COURT:** To Apple?

2 **MR. POMERANTZ:** Apple, yes.

3 But based on my discussions with Epic's counsel during the
4 course of today, I expect we're going to work that one out.

5 **THE COURT:** Oh, good. Okay.

6 **MR. POMERANTZ:** And we'll talk tonight, but I'm pretty
7 sure we're going to work it out.

8 **THE COURT:** Is Apple coming tomorrow, is that the --

9 **MR. BORNSTEIN:** I don't know, Your Honor.

10 **MR. POMERANTZ:** They had sent us some exhibits that
11 relate to our agreements with Apple --

12 **THE COURT:** Oh, I see. Okay.

13 **MR. POMERANTZ:** -- as something they want to use with
14 one of our witnesses tomorrow; and based on my conversations
15 with Epic's counsel, I believe we're going to work that one out
16 tonight. But we'll notify Your Honor tomorrow if there's any
17 issues.

18 **THE COURT:** Okay.

19 **MR. BORNSTEIN:** Just one other question, Your Honor.

20 **THE COURT:** Yes.

21 **MR. BORNSTEIN:** For planning purposes, how long do you
22 anticipate you'll want to keep us tomorrow and how much time do
23 you expect we should be spending on an exam of the witnesses?

24 **THE COURT:** Just budget an hour and see how it goes.

25 **MR. BORNSTEIN:** Okay. So we'll do something in

1 15 minutes, whatever is useful for the Court.

2 **THE COURT:** Yeah.

3 **MR. BORNSTEIN:** Okay. Thank you.

4 **THE COURT:** Oh, also, looking a little bit down the
5 road, I rearranged my other commitment, so we will have trial
6 on Monday, December 11th. We will not have trial on Monday,
7 December 4th. All right?

8 So that whole week, rather than Tuesday to Tuesday, will
9 just be Sunday to Sunday. Okay?

10 All right. I'll see you in the morning.

11 **MR. BORNSTEIN:** Thank you, Your Honor.

12 **THE CLERK:** All rise. The Court is in recess.

13 (Proceedings adjourned at 3:32 p.m.)

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15 **CERTIFICATE OF REPORTER**

16 I certify that the foregoing is a correct transcript
17 from the record of proceedings in the above-entitled matter.

18
19 DATE: Wednesday, November 15, 2023

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22 

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24 Kelly Shainline, CSR No. 13476, RPR, CRR
25 U.S. Court Reporter